AI-based
K-PORT
solution

Use Case

Ai-based K-PORT solution for monitoring and early detection of problems in the field

With K-PORT solutions featuring hardware and software, we offer our customers a secure platform to operate Docker container-based projects in the field.

The project presented here was designed to transfer existing Docker containers into the K-PORT system and then manage them using a web-based management portal.

The focus was on modifying the existing container build chain to reduce excessive bandwidth usage and minimize roaming costs as a result.

The susietec products

- EquipmentCloud®
- K-PORT

The service

- Hosting and modifying the software and hardware of the existing solution

The challenge

- Relocation of an existing solution
- OpenThread integration into the susietec SecureOS operating system
- Modification of the hardware for IP 54 and OpenThread

The solution

- EquipmentCloud® monitoring with K-PORT
- Extending the Docker CE environment to ensure compatibility with the existing solution
- Customizing susietec SecureOS
- Modifiying the KBox A-250 including extending the housing and integrating modified connectors

The result

- Setup-specific AI models can be managed using K-PORT
- Up-time has been increased while bandwidth and roaming costs have been reduced
- A reliable solution has been provided for operation in the field

”AI-based K-PORT solution for monitoring and early detection of problems in the field”

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Technical details of the project

The basis for this project was a complex solution with 30 Docker containers per gateway - for OpenThread Border Routers as well as for AI inference.

K-PORT simplifies handling: in future, the distribution of the containers to the devices in the field will only require a manual upload to the system and selecting the target systems regardless of their location.

In addition, it is possible to test updates first in small groups and check them in real-time on the corresponding device using the remote function. An automated mass roll-out can then take place.

Advantages for the customer

Using susietec SecureOS significantly reduces the monthly data volume required for each device. Modifying the firmware of the OpenThread modules also ensures that individual modules can be used directly from a Docker container.

Another advantage is that susietec SecureOS runs on the components that are actually needed: in its hardened state, the operating system transmits only delta updates by comparing the current status in the device with the latest version on the server. This reduces the bandwidth of the integrated LTE modems as well as the roaming costs incurred.

Customer key figures

- The client is part of a German limited partnership with more than 47,000 employees worldwide.
- It is the leading international supplier of industrial sealing technology with locations in 86 countries.
- The customer's focus is on reliability and safety, such as in ATEX environments - i.e. Oil and Gas - where the K-PORT solution is also used.
- The customer's core products include mechanical seals and seal supply systems, magnetic couplings, carbon floating ring seals, expansion joints and flat gaskets.

About susietec

We see digital transformation as a holistic approach. With the susietec toolset, we support companies in working out the potential of IoT and digitalization: The combination of software, hardware and know-how enables functional and smart solutions for equipment suppliers, providers and manufacturers. That is how we succeed in implementing purpose-driven changes effectively – with the aim of driving forward digitalization in the long term.

susietec solutions can be used in an existing environment and also provide a basis for the new development of machines, components and production plants.

In the association of Kontron companies we help you take the right steps towards digital transformation using our experience from numerous digitalization projects.

For more information, please visit:
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