

A cloud against strokes

apoplex medical technologies offers diagnostic software from the Telekom Healthcare Cloud

Reference project:

apoplex
medical technologies

“Certified medical solutions from the cloud – that’s pure innovation. The Telekom Healthcare Cloud from T-Systems combines modern technology with compliance with all regulations in the healthcare sector.”

Albert Hirtz, Managing Director, apoplex medical technologies

A world with fewer strokes – that’s the vision defined by apoplex medical technologies, based in Pirmasens in the German State of Rhineland-Palatinate. Founded in 2004, this mid-sized company offers IT solutions that help identify the risk of strokes in advance. To do so, doctors in practices and hospitals record EKGs (electrocardiograms).

They then send them to the service from apoplex medical technologies in machine-readable form. The Stroke Risk Analysis (SRA[®]) software analyzes the EKG within minutes and scans for signs of episodic atrial fibrillation, an important indicator for risk of strokes. Atrial fibrillation can be detected three times as fast and twice as frequently as through conventional methods. After all, two million people in Germany suffer from this atrial fibrillation. And half of them aren’t even aware of it, because it triggers no symptoms. With the software from apoplex, doctors can identify people at risk of stroke at a very early stage and introduce countermeasures – before a stroke occurs.

The solution from apoplex medical technologies is a certified medical product that is already used in over 200 hospitals and cardiology practices. The company has established footprints in Spain and Italy as well. Further expansion is planned – with the help of the Telekom Healthcare Cloud from T-Systems.

At a glance

- European expansion for a medical solution: identifying risk of strokes
- Ensures rapid processing of analyses
- Need for a new, scalable platform
- Fulfillment of statutory regulations
- Telekom Healthcare Cloud is the new hosting platform for the early detection software

T · · Systems ·

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Reference in detail

The challenge

In the future, the team wants to offer its service throughout Europe and ensure full scalability to deal with any load: “We want to guarantee fast response times and an excellent user experience even when many hospitals and private practices are analyzing EKGs at the same time,” explains Albert Hirtz, Managing Director of apoplex. To achieve this, the experts have already modernized the software to support microservices and containers. This has laid the groundwork for scalability and expansion at the application level, but the classic operating platform in a local data center can’t keep up. The solution lies in the public cloud. A public cloud for medical products – is that even possible?

The solution

While U.S.-based hyperscalers meet the technical prerequisites for expanding the company’s European footprint and for scaling, they are not licensed to operate medical products. They fail to meet basic privacy laws like the EU GDPR (General Data Protection Regulation), nor do they fulfill the extended regulatory requirements of Germany’s criminal code (StGB) or social security code (SGB). This meant the solution for apoplex medical technologies required using a European public cloud that satisfies European data protection standards to run its SRA software. The company decided in favor of the Telekom Healthcare Cloud, backed in this case by the Open Telekom Cloud. It also scored points with its approval under §203 StGB, the law against revealing personal information – which means custodians of professional secrets, like doctors, can also use them without hesitation. Processing of the social data in line with §67 SGB is possible. The cloud-native application runs on a failsafe cluster of virtual machines in the Open Telekom Cloud. The infrastructures adjust to the application load. When many users access the service concurrently, the cloud automatically activates new machines, and spins them down afterwards. The object storage for the EKGs and analysis data also grows automatically, guaranteeing that the analyses are always available later.

Customer benefit

With the new platform, apoplex medical technologies can now market its service throughout Europe. Users require only a protected Internet connection and can send the data to Deutsche Telekom’s data center in Magdeburg/Biere. The secure analysis is then performed there in minutes. Doctors receive the results shortly after recording the data. The processes maintain their usual speed even when multiple users access the service. The modern platform makes it possible, because the server capacities adapt to the load automatically. The health service provider only pays for what it uses. At the same time, both apoplex medical technologies and the client doctors have the security that the data is processed compliant with all of Germany’s strict regulations. Performance and innovation meet good conscience, making apoplex medical technologies a true innovator in the healthcare segment and proving that medical services and the public cloud don’t have to be a contradiction. “For us, Deutsche Telekom is a solid, well-known cloud partner that both we and our customers can trust,” summarizes Hirtz.

Further advantages:

- Compliant with all legal regulations: SGB, §203 StGB, EU-GDPR
- Professional data and IT security
- Infrastructure as a service, including support; no hardware expenditures needed
- Strong innovative capability
- Pay as you use – flexible costs based on business volume
- Easy handling of peak loads

Contact

T-Systems International GmbH
Hahnstraße 43d
60528 Frankfurt am Main, Germany
Email: referenzen@t-systems.com
Internet: www.t-systems.com

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T-Systems International GmbH
Marketing
Hahnstraße 43d
60528 Frankfurt am Main
Germany