

The hospital from the public cloud

Indonesian hospital group migrating its IT to AWS
with help from T-Systems

Reference project:



“T-Systems migrated our business-critical applications to a future-oriented cloud-based infrastructure in record time and without any downtime.”

Johan Soegiarto, Corporate IT Director, Mitra Keluarga

Mitra Keluarga, or MIKA for short, is a company offering premium health services in Indonesia. Complex operations as well as X-rays and analyses are performed in the Group’s hospitals. The first hospital was founded in 1989 and has continuously grown, not only by building new hospitals but also by acquiring existing ones – most recently in Cibinong and Subang. MIKA currently operates almost 3,000 beds in 25 hospitals. More than 7,700 medical staff care for over 2.9 million patients each year. The company went public in 2015. The health service provider uses solutions including SAP to manage its hospital processes. As part of a data center modernization, MIKA decided to migrate its SAP and non-SAP systems to the AWS cloud. As an experienced AWS and SAP partner, T-Systems carried out the migration.

At a glance

- New cloud sourcing strategy: from an on-premise solution to the AWS Cloud
- Lack of in-house IT expertise for the cloud migration
- T-Systems developed the blueprint and successfully migrated SAP and non-SAP systems
- High system availability

Reference in detail

The challenge

SAP applications are essential to Mitra Keluarga. The core processes of the hospital operations such as patient administration and billing are mapped in SAP. The business/ financial planning, the filing of electronic documents, and time logging are also performed in SAP. Furthermore, SAP orchestrates the processes: Specific medical systems such as Sysmex used for laboratory diagnosis are connected to SAP to ensure that administrative processes and information transfers work smoothly. As a result, the medical staff has constant access to patient-relevant information and can ensure excellent care. MIKA's core expertise is patient care but not only in a medical sense of the word; MIKA also offers excellent care in terms of patient administration. MIKA also offers a high level of professionalism in terms of hospital management as a service on the market. The health service provider uses external IT providers to operate the infrastructure of the SAP systems. In the past, the clinical IT repeatedly failed which resulted in significant disruption to patient care. MIKA therefore decided to replace the transitional on-premises operation and migrate the systems to the AWS Cloud. The objective of this process is to ensure service availability, especially for critical business workloads. The perspective for a future-oriented structure was clear – especially in light of the fact that AWS will establish a new cloud region in Indonesia in the medium-term. However, the transfer of the entire hospital IT from on-premise systems to the public cloud was a challenge for the hospital. The IT staff had no experience with such a migration.

The solution

MIKA needed a reliable partner who offered both AWS expertise as well as SAP experience and opted for T-Systems who is currently implementing SAP Healthcare for the hospital chain. T-Systems developed a blueprint for the migration and assumed the entire migration process. This included the setup and organization of the new infrastructure on the AWS cloud in Singapore, including the network setup, the migration of SAP and non-SAP systems, and establishment of a secure access concept via multi-factor authentication, password policies, and a central identity and access management. The applications remained largely untouched during the migration, i.e., T-Systems adopted a lift & shift approach. In doing so, the AWS infrastructure was first set up. The new SAP systems were installed on these applications. In a third step, the data was copied from the inventory systems and put on the AWS infrastructure. The migration had no negative impact on the performance of the productive systems and caused no downtimes. Today, the hospital IT systems use 65 EC2 instances in a high availability cloud architecture that also provides backups for all systems. All hospital sites now have VPN access to the centrally provided applications. The entire migration process was fully completed in a record time of only three months – from February to April 2020 – during the global coronavirus pandemic.

Customer benefit

With the successful migration, T-System has given MIKA's sourcing a new basis. "With T-Systems' help, we were able to transfer our applications to a more powerful infrastructure without any downtimes," summarizes Johan Soegiarto, Corporate IT Director of MIKA. Hospital operations remained uninterrupted during the migration process. The central IT systems now come from the AWS Cloud. As a result, the health service provider benefits from improved reliability due to the more stable and scalable infrastructures. The services are available at all times. Capacities for an in-house infrastructure no longer need to be provided as MIKA acquires the infrastructures as a complete service. The hospital's IT team can now manage the SAP and non-SAP applications itself. All reporting and security mechanisms have been established. MIKA again has a solid foundation through which the hospitals' internal and cross-site processes such as the assignment of the operating theaters and beds as well as the analytics are reliably supported. However, the future is even more important in the eyes of the IT owners in Jakarta: „By operating in the AWS cloud, we have made ourselves future proof. In the event of further acquisitions, new locations can be quickly connected to the central backend. In doing so, we ensure that work is carried out with the same efficient processes throughout the company.”

Further advantages:

- No investment
- Tested "best-practice" migration methods for SAP
- Entire migration from a single source
- Migration in record time and no downtimes

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