Optimal security solution for sensitive patient data

Secure digital workplace concept for staff

New technologies that make Asklepios more attractive to new recruits

Patients benefit from personalized treatment and faster diagnosis

Mission accomplished: Asklepios goes digital with VMware

The Asklepios Group is one of Germany's largest private hospitals. "The highest standards of medical treatment and a commitment to continuous improvement above and beyond what is required by law" have established the Hamburg-based hospital group as a benchmark in the German healthcare sector. Asklepios has advanced to the forefront of digitalization, tearing down system silos, streamlining data sharing and developing a robust security architecture for its countless devices. Today, VMware Horizon® and Workspace ONE™ are the beating heart of the healthcare provider's IT landscape. VMware Carbon Black Cloud™ Endpoint Advanced, a cloud-based security solution, combines with VMware Carbon Black® App Control for critical infrastructure protection to maximize security across the group's virtualized data center. Thus, 2.6 million patients served every year at Asklepios hospitals benefit from excellent standards of treatment and medical research, and also from personalized processes and faster diagnoses.

Laying the technological foundation for innovation

People are and always have been at the center of everything Asklepios does. Even when it started as a small, family-run company back in 1985, Dr. Bernard gr. Broermann had a crystal-clear focus on one thing: patients' wellbeing. Nearly 35 years on, the Asklepios Group has an impressive 67.000 people on its payroll at 170 medical facilities in 14 German states. It serves the needs of 2.6 million patients a year. With high investments in cutting-edge medicine and digitalization as well as the acquisition of MediClin AG and RHÖN-KLINIKUM AG, Asklepios is playing a key role in driving

ASKLEPIOS

Founded in 1985, Asklepios today operates around 170 facilities, employs 67.000 people and is one of Germany's leading digital healthcare groups. Since its inception, it has remained committed to the values of medical quality, innovation and social responsibility that shape its culture and development. https://www.asklepios.com/en/

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innovation in the healthcare sector. Since Medilys Laborgesellschaft GmbH acquired a majority stake in the company, Asklepios has also had one of Europe's largest medical laboratories at its disposal. The hospital's ambition is to lead the way in the digitalization of healthcare in Germany, to further improve the quality of patient care and to shape the medicine of tomorrow.

Digitalization in the service of humanity

Personalized and patient-centric processes, fast diagnosis, efficient treatment, optimal outcomes and a positive patient experience: The Hippocratic Oath has long ceased to be the only factor in making patients well again. Digital transformation is now ensuring that many mutually interdependent hospital routines run more efficiently, reliably and closer to the patient. Insular systems that have grown over time and isolated and complex processes are a common reason why modern digital technology is badly needed in this industry. But there is also a need for strict security. Today – and above all tomorrow – the fast, reliable and seamless sharing of information and the straightforward deployment of systems and devices will be decisive for Asklepios' medical processes. At the same time, the technological foundation must be laid for continuous standardization, interoperability, security and innovation.

"We obviously have a very strong focus on cybersecurity," says Daniel Maier-Johnson, Chief Information Security Officer (CISO) at Asklepios: In the area of privacy and data protection, the healthcare sector cannot afford half-measures. These sort of attacks are a threat to patient's identity and they can impede hospital operations and place the health and well-being of patients at risk. The hospital operator therefore took swift action when a risk assessment performed by Maier-Johnson revealed moderate potential for improvement. To ensure patients and their data will not be exposed to threats from cyberattacks, top priority was given to modernizing security processes. The new concept had to measure up to the requirements of Germany's so called critical infrastructure laws, but they also had to function with as few staff as possible. Beyondwarding off threats, the new solution had to be intelligent enough to to learn constantly.

"VMware fits in with our ecosystem"

Named after Asclepius, the Greek god of the healing arts, the Asklepios group set out to find a flexible, agile security platform into which new systems and endpoints could be integrated quickly and easily. "We launched an evaluation process, but the only really viable option for our enterprise requirements, and our many thousand endpoints, was VMware," Daniel Maier-Johnson says. "That is especially true when you need to combine extensive standardization and automation with maximized availability." It helped that the hospital group had already been working with proven virtualization solutions for 16,000 workspaces based on VMware Horizon and Workspace ONE. VMware vSphere® was in place as part of a long-standing partnership with the digital solution provider.

The cloud-based security solution Carbon Black Cloud Endpoint Advanced and Carbon Black App Control now maximize security across the hospital operator's virtualized data center. Carbon Black Cloud Endpoint Advanced is a next-generation antivirus solution that also provides endpoint recognition and response capabilities based on behavioral patterns. It includes Carbon Black® Cloud Audit & Remediation™, a real-time audit and correction solution that gives Asklepios' security teams fast, easy access to unified data and enables them to adjust the system status of endpoints and containers.

Improvements for staff and patients alike

Thanks to VMware Horizon and VMware Workspace ONE, Asklepios' staff can work from anywhere with access to a secure, high-availability platform. Nursing staff can, for example, use mobile devices to tap into everything they need to know about patients anywhere in the building. "We see VMware as an investment in improving the way our people work, from senior doctors to nurses" Henning Schneider says. "We are harnessing the opportunities afforded by digitalization to continually optimize the quality of healthcare, but also to ease the workload on our colleagues. By 2024, our plan is to be a fully digital healthcare group."

Daniel Maier-Johnson stresses that there were no missteps when implementing the security solutions: Both Carbon Black Cloud Endpoint Advanced and Carbon Black App Control were up and running smoothly in under two months. Carbon Black Cloud empowers the CISO and his IT team not only to wart cyberattacks, but also to analyze activities on the devices, adjust preventive measures in response to new threats and automate previously manual workflows throughout the entire security infrastructure. The confidentiality of patient data thus remains securely protected. The Carbon Black App Control is able to control critical servers and systems to prevent undesirable modifications and guarantees consistent compliance with all relevant legal specifications.

As a result, it is easy for the staff of Asklepios to work from anywhere – and to do so using virtual desktops that are more

securely protected. Even the unprecedented circumstances relating to the coronavirus have created no problems: "Thanks to VMware, we were able to respond flexibly to the pandemic," Daniel Maier-Johnson affirms. "We were immediately able to work securely from home." Nor are former IT silos still an issue, given that data sharing now meets the highest standards: It is much safer and more convenient to use patient portals, access the wireless LAN in the cafeteria or book appointments online. Daniel Maier-Johnson noted, "By guarding sensitive patient data against cyberattacks and data breaches, we are bolstering our reputation as a trusted, security-conscious healthcare group." Thanks to VMware, the

Armed with an ultramodern IT infrastructure built on the firm digital foundation of VMware, the leading hospital operator is ideally placed to meet the needs of today and tomorrow. Not long from now, Asklepios could have an almost complete stack based on VMware Cloud Foundation.

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DANIEL MAIER-JOHNSON, CHIEF INFORMATION SECURITY OFFICER (CISO) AT ASKLEPIOS

hospital operator can do more than merely keep up with constant changes in the industry: it can also respond quickly and flexibly to medical advances and changing political conditions. As Maier-Johnson sees it, these cutting-edge technologies make Asklepios more attractive to new employees and is an integral aspect of their success. Ultimately, the over two million patients served every year at the Asklepios hospitals benefit from excellent standards of treatment and medical research, and also from personalized processes and faster diagnoses.

AI and robotics for medical innovation

Building on this experience, the Asklepios Group is keen to leverage its IT to also tap new lines of business. Going forward, there are plans for additional IT services for internal use and for a new self-service platform for apps. Preparations are underway to use VMware SD-WAN by VeloCloud to protect medical devices, too. The aim is for largely insular medical equipment to be incorporated in the Asklepios network with all key security functions. "Digitalization will help new digital services and offerings to emerge," Maier-Johnson notes. "For the future, we are thinking about the greater use of AI, automation and robotics innovations for both patients and staff. As such, we are driving advances in medical care."

#VMware Horizon and #WorkspaceONE enable staff at the @asklepiosgruppe to work from anywhere on a reliable, secure platform. Mobile devices show nursing staff everything they need to know about their patients.