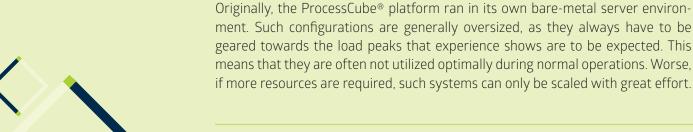# More focus, less effort:
How 5Minds benefits
from the SysEleven Cloud

5Minds

The 5Minds team from Gelsenkirchen-Buer stands for a form of digitalization that is simple and accessible. With their ProcessCube® platform and their experts in consulting, development, and operations, they have been enabling companies to digitize and automate complex processes quickly and cost-effectively for over 15 years. Because 5Minds operates (among other things) a platform for the global recycling of electronic devices that requires 24/7 availability, the company has high demands on the infrastructure's security, reliability, and scalability.

Originally, the ProcessCube® platform ran in its own bare-metal server environment. Such configurations are generally oversized, as they always have to be geared towards the load peaks that experience shows are to be expected. This means that they are often not utilized optimally during normal operations. Worse, if more resources are required, such systems can only be scaled with great effort.

Kubernetes and cloud technology, on the other hand, allow resources to be added flexibly and immediately, so that even unexpected new load peaks can be handled quickly. 5Minds already had extensive in-house expertise in the application and use of Kubernetes, as the ProcessCube® platform itself was already based on Kubernetes technology – but not the underlying infrastructure used in its operation. In other words, 5Minds had experience with Kubernetes, but no experience with management at the infrastructure level.

Motivation for migrating the infrastructure to Kubernetes

5Minds wanted to get rid of tasks that were not part of its core business such as maintenance of operating systems and infrastructure. For example, their previous IT service provider was unable to meet the requirements for the administration and maintenance of an open source-based Kubernetes cloud. One reason for this is the general shortage of skilled workers – leading to problems with updating and maintaining the systems there. At the same time, 5Minds had to meet its own requirements and the guaranteed service level agreements (SLAs) with customers in terms of reliability and availability. The new provider also needed to be able to provide an ISO-certified data center.

SysEleven OpenStack Cloud meets these requirements. Thus customers can fully concentrate on their own applications with the help of Kubernetes as a Service (MetaKube Core) while SysEleven takes care of Kubernetes management.

Technical challenges for migration

The migration project was very demanding. Adapting and redesigning the ProcessCube® security concepts with regard to authorization and authentication posed a major challenge, as all of the evaluated providers use their own standards and procedures. This required an extensive revision and adaptation of the existing access data and user authorizations. In addition, security concepts had to meet the new requirements of the different platforms – which is needed to ensure a high level of security in the management of user data and access.

Another key challenge was to optimize the transition from an extensive bare-metal server environment to a cloud-based solution. This required precise planning and estimation of the resources required in the new cloud infrastructure. The cloud environment has different scaling mechanisms and performance characteristics. This means that the actual requirements for storage, computing power, and network bandwidth had to be carefully analyzed in order to avoid over- or undersizing from the outset while efficiently balancing costs and performance.

Although 5Minds already had experience with Kubernetes, some adjustments had to be made when implementing the ProcessCube® solution.

Challenges and how they were resolved

The migration went smoothly overall, partly because SysEleven stood out from other evaluated providers due to its high degree of transparency and traceability of the necessary deployment adjustments.

Even so, some challenges arose: The differences in the security concepts described above were easily overcome thanks to the fast and efficient cooperation with SysEleven's support team. SysEleven's comprehensive and helpful documentation helped to resolve many questions in advance.

"Once there was a problem with the network stack of a cluster after emergency maintenance. Here, too, a solution was found

Martin Möllenbeck
Partner and Managing Director
Steffi Jones
Head of Organizational Development
Nicole Jones
Partner and Managing Director

quickly thanks to the fast response of the personal support team," says Martin Möllenbeck, CTO and founder of 5Minds. Due to the high demands on 24/7 operation, downtimes or delays for 5Minds customers outside of scheduled maintenance windows were avoided.

Advantages of the new solution

The migration to the SysEleven OpenStack Cloud has fully met 5Minds' expectations. The company has successfully moved away from bare-metal infrastructure and can now better focus on its main product ProcessCube®. By leveraging SysEleven's capabilities, 5Minds significantly improved the reliability and availability of its services.

The management of the Kubernetes environment has been simplified by using Kubernetes as a Service with MetaKube Core from SysEleven. The company is now able to offer its solution worldwide with high availability. The SLAs offered by SysEleven help 5Minds to meet the resilience and availability requirements of their customers.

The next goals

Based on the experience with the migration and the current challenges, the following goals for the future have emerged: In addition to the main focus on MetaKube, 5Minds is considering the future use of additional services from SysEleven to further optimize the infrastructure. This includes, for example, implementing advanced automation and DevOps practices to increase efficiency and take full advantage of the cloud infrastructure. In this way, 5Minds aims to create the basis for expanding its business globally and tapping into new markets.

»By migrating to SysEleven MetaKube, we have created a solid basis for our future growth and technological development. We can use existing cloud resources more efficiently and adapt our solutions to new requirements much more quickly and flexibly than before. At the same time, we have a partner that is ISO 27001 certified, which helps us to answer our customers' questions in the context of NIS-2.«

Martin Möllenbeck, CTO and founder of 5Minds

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