



CloudStack Enables weSystems to Develop Tailored Customer Solutions



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open source cloud computing

we | **SYSTEMS**

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Introducing a new system to your organisation should inspire your colleagues to look at ways it can be utilized to help develop new solutions. The best systems are those that manage this whilst enabling you to achieve your vision and goals.

weSystems specialize in IT infrastructure, data center services, connectivity and networks. They develop computing and storage solutions that give their customers the highest computing power and the most secure storage capacities. From analysis and strategy to set up, operation, support, monitoring and the further development of IT infrastructure, they provide all services from a single source.



Stephan Bienek, Head of Hosting, weSystems AG said, “Digital transformation is changing the way we live and work together. New challenges require individual solutions that support our customers in achieving their goals. Our job at weSystems is to develop customised solutions that support the process of digitalization and return customer focus to their business.

“We are always searching for the best tools to support this vision, but sometimes feel like we would have to adopt our vision to the tool or reinvent the wheel. We try to build on open-source where possible, even if it means we take a few more efforts in the beginning, we are convinced of the benefits of building on open-source in the long run. It is a true and transparent give-and-take combined with lots of passion by the community.”



Multi-Tenant IaaS Cloud Offering

Based on customer requirements and their vision, weSystems were looking to build a multi-tenant IaaS cloud offering that could support a wide range of different workloads. Additionally, they had been searching for a new platform on which they could base their managed hosting and application services. And as previously mentioned, they had a strong tendency towards utilising an open-source product.

In particular, the new platform had to provide:

- Support for multiple zones
- Multi-tenant ready IaaS functionality
- Support for delivering managed services to customers
- Kubernetes ecosystem integration
- Support for Ceph Storage
- Support for building and operating hybrid solutions
- Possibilities to create custom service offerings



Build Complex Virtual and Hybrid Solutions

After looking at several options, weSystems eventually chose CloudStack. Brian Nørgaard, Director Nordics, weSystems ApS, explained the reasoning behind this decision. “CloudStack outran the other options we evaluated, such as OpenStack, Proxmox and plain VMware.

“The functionality it provides matched our requirements the most in terms of virtual server management, networking functionality and multi-tenancy. The rich feature set in computing, networking and UI/API’s flexibility, to combine features fulfilling a new requirement whilst still keeping the ease of operation and use is the perfect match for us.

“It is important to us to feel inspired by the tool we are choosing. Once a new challenge comes up the possibilities of the tool should inspire us to instantly start thinking about solutions and should motivate us to start trying out combining features to new solutions.

“CloudStack does this, specifically, the wide range of virtual network types and network functions allows us and our customers to build complex virtual and hybrid solutions and solutions, which are targeting very specific and unique challenges.

“In addition, the possibility to deploy standard and highly customized virtual machines attracted us, specifically for use cases like GPU-supported Render Streaming platforms. The clean and self-intuitive Web UI and API helped to bring instant adoption in the team and our customers.”

Integrates Into Technology Stack Components

The implementation started with the PoC, which was built during the evaluation process. “Pretty quickly we’ve been sure the clarity of documentation, ease of set up, daily operation and usage was a match for us”, said Stephan.

“Once the PoC set up was in a state we felt comfortable with, had a full understanding of each component and a clear view of the requirements, we went ahead and set up a first productive zone. In parallel, we started to adjust, build and implement automation processes and tooling around the new CloudStack platform, as well as usage tracking and billing.

“Testing the platform according to the use cases we were expecting was done and had to be repeated at later stages on the PoC platform, as unexpected new requirements were arising. Overall, the team is very happy with the possibilities CloudStack provides to accomplish new, unexpected challenges. So far, we have always found a way to combine existing functionality to provide solutions for new requirements.

“Nearly every member of our engineering teams is touching CloudStack in some way. That’s great, as it closely and smoothly integrates into most of our technology stack components which reduces operational risks and build trust in the platform across the teams.



Robust and Flexible Infrastructure

Being a supporter of open-source, it was important to weSystems that they can contribute to CloudStack and the components of its ecosystem in many ways. They are keen to contribute ideas for new functionality, code to the extensive and transparent codebase and support to the community via the mailing lists.

Brian commented, “The large passionate community and transparent codebase allow us to have a low-risk operation with great community support and deep dive troubleshooting based on the source code.

“The workloads we now run on CloudStack range from classic Webserver farms, Kubernetes Clusters and Build Servers to latency critical Managed VoIP, Contact Center and collaboration solutions as well as Managed Monitoring solutions and high demanding GPU supported Render Streaming clusters. All of these workloads have specific requirements and require a robust but still flexible infrastructure.

“We build on open-source where possible and therefore run all VMs on KVM Hypervisor in combination with Ceph Storage across two geographically separated zones in Europe. All components are communicating via our fully redundant VXLAN-based networking infrastructure.”



Consolidating Virtual Compute Requirements

“CloudStack enables us to build unique solutions solving the unique requirements and challenges of our customers”, concluded Stephan.

“We’ve been able to consolidate most of our virtual compute requirements to one platform, with CloudStack providing the base for our IaaS Cloud offering and our Managed Hosting Services. The possibility to build hybrid solutions, combining virtual resources of CloudStack with physical and virtual resources outside of CloudStack into one platform helps to build the perfect solution exactly fitting our customers’ requirements.”



“Apache CloudStack fits perfectly into our open-source strategy. The software offers the flexibility to meet specific customer requirements and thus helps us to map our IaaS and managed hosting needs on one platform. In particular, the intuitive web interface and the well-documented API is received positively by our customers. CloudStack as a combined platform for our hosting product simplifies platform operation for our engineers and continuously provides inspiration to solve challenges.”

Stephan Bienek,
Head of Hosting, weSystems AG



“The wide range of virtual network types and features allows us and our customers to create complex virtual and hybrid solutions that target very specific and unique challenges. It is fantastic to deploy standard virtual machines and highly customized virtual machines at the same time.”

Brian Nørgaard,
Director Nordics, weSystems ApS



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