T-Systems' virtual innovation center

CO-WORKING IN VIRTUAL SPACE

It's a perfectly normal day at the innovation center in Munich. On the agenda – a design thinking workshop. A T-Systems moderator welcomes the participants, an introduction round is followed by an explanation of the goals and the workshop begins. The participants quickly engage in lively discussions, laugh, and stick post-its. Everything just as usual, except for one thing: All the participants are actually working from home.

It's their 3D avatars that gesture and interact with each other in the virtual innovation center almost like they do in real life. To make this possible, T-Systems and the start-up, doob group, have virtually recreated their innovation center and have created around 400 avatars of employees to date.

High graphics performance and low latencies are essential for a smooth flow of digital, interactive workshops. To ensure this at all times, the innovation center uses flexible IT resources from the Open Telekom Cloud.

AT A GLANCE

The Task: To implement the virtual innovation center, T-Systems needed a secure platform with powerful graphics processors and low latency. Because IT resources are often only needed for short periods of time, the innovation center was looking for flexibly scalable resources.

The Solution: T-Systems hosts the virtual innovation center in the Open Telekom Cloud. Virtual machines with Nvidia graphics cards and correspondingly powerful graphics processing units (GPUs) provide the necessary graphics performance.

The Advantages: This enables T-Systems to offer the participants in its virtual workshops a realistic, smooth experience. The costs for this remain calculable thanks to the pay-per-use payment model. In addition, the solution meets the high security requirements with multiple-certified data centers, and sensitive customer data is stored in compliance with GDPR.

THE CUSTOMER

The T-Systems innovation center in Munich is a creative laboratory and showroom for digital innovations. Here, experts work together, often playfully, on tomorrow's technology trends. "At the innovation center, we bring innovations to life and work together with customers in interactive sessions on new concepts for their digital business challenges," says Andreas Droste, Senior Innovation Manager, T-Systems International. "With the virtual offer, we are now breaking new ground and enabling customers to participate in our workshops completely independent of location." To this end, T-Systems worked with the TechBoost start-up doob group to recreate the rooms virtually and scan around 400 3D avatars of employees.

THE CHALLENGE

For the virtual image of the showroom in Munich, T-Systems needed a platform that could provide high graphics performance with low latency for the virtual workshops. This is the only way 3D avatars can interact without time delay and create a realistic experience for participants. In addition, the platform had to meet important security requirements, since the workshops use personal customer data.

THE SOLUTION

When Droste met the virtual reality start-up, doob group, at a Telekom event, the idea of a virtual space for customer workshops immediately came to mind. The 3D specialists at doob group create virtual worlds and avatars for VR applications. For this purpose, the start-up uses a company-owned gaming engine hosted in the Open Telekom Cloud. However, the software is not only suitable for games, but for any graphic application with high performance requirements.

Together with the start-up company, T-Systems developed software based on the gaming engine that enables them to invite customers from all over the world to their virtual innovation center and interact with them. In this way, a technology originating from the gaming world is used for a business collaboration platform. The entire environment runs in the Open Telekom Cloud in various virtual private clouds to ensure security requirements are met. For the

required computing power, CPUs, RAM and GPUs from powerful P100 Nvidia graphics cards can be added flexibly and on-demand via the public cloud solution as required. Resource management is fully automated thanks to scripting in Terraform. The multiple certified data centers also ensure high data security and GDPR-compliant data protection.

THE CUSTOMER BENEFITS

For an extensive interlocking of the real and virtual world, different media such as audio and video conferences as well as live streams via camera can be integrated into the virtual space. This turns the virtual innovation center into a real collaboration platform. Participants don't necessarily need VR glasses for this; they can simply participate in virtual sessions via their browser. The result is a mixed reality environment that combines virtual face-to-face meetings with digitalized showcases and live streams. "The mix of 3D avatars on stage integrated with video conferencing is a new, very realistic backdrop. After the uncertainty and depression of the coronavirus crisis, this event spread enthusiasm," says Roland Schütz, CIO of Deutsche Lufthansa. "For us as customers it was also a convincing demonstration of their technical expertise."

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