Success Story

Connecting 'Things' everywhere – Mobile Virtual Network Enabler Simfony takes IoT to the cloud

Simfony embeds Machine-to-Machine Communication (M2M) in IONOS Cloud

Simfony is a Mobile Virtual Network Enabler (MVNE) specialising in the Internet of Things (IoT). The company provides a variety of services enabling its customers to create a mobile network of the most varied technical components and generate added value. For example, internet providers can expand their portfolios with mobile communication ranges and sell their own branded SIM cards without having to build up networks themselves. These offer much more than the classic SIM cards private users have in their smartphones. The emphasis is on multi-client networking and handling data flows in the commercial environment. Furthermore, Simfony also provides easy and complete billing management. The company depends on a high standard of technical data protection and holds the relevant ISO certification for this.

About Simfony

Simfony, founded in 2014, is a Mobile Virtual Network Enabler (MVNE) focusing on the Internet of Things (IoT). The company has branches worldwide, including in Mexico, the USA, Romania and Italy. It enables internet providers to offer their own, branded SIM cards. To do this Simfony offers plans for M2M connections based on eSIM/eUICC standards. The Simfony portfolio also includes a self-service platform for end users, and Simfony provides its customers with the appropriate APIs. Furthermore, Simfony offers an end-to-end solution for telecommunications providers that want to launch IoT products and services under their own names. With a pay-as-you-grow model Simfony lowers the entry barriers for M(V)NOs to quickly launch based on either a cloud or on-premises deployment.

The challenge

As an MVNE, Simfony depends on reliable cloud solutions. In order to guarantee data connections with the lowest possible latency, Simfony has already used cloud services in data centres in direct proximity to the internet's major peering hubs. Up to now, Amazon Web Services (AWS) had been their preferred service provider. "The closer the data centre is to the SIM cards, the better the latency of the connection," says Joachim de Wild, CEO of Simfony. "Also, multiple hosting guarantees the systems are resilient – we depend on fail-safe operations." Theoretically, Simfony could host this kind of multi-core network with almost every cloud provider, posing the question of which features differentiate providers.

Simfony wants to equip its customers with highly available, low-latency data connections. For this reason, the MVNE hosts its systems worldwide, distributed across several data centres. In order to provide a more personalised service while benefiting from particularly high-quality SLAs at the same time, Simfony has migrated its infrastructure for virtual enablement to IONOS Cloud.

MNO, MVNO, MVNA and MVNE – what is the difference?

- **The Mobile Network Operator (MNO)** is the most commonly visible mobile network operator, such as Vodafone, and is responsible for the construction and daily operation of the mobile network. It must acquire the frequencies from the regulator and then buy the network equipment. The MNO needs its own Operation Support Systems (OSS) and Business Support Systems (BSS), which are responsible for billing direct customers and, if applicable, the indirect billing of MVNO customers.

- **Mobile Virtual Network Operators (MVNOs)** do not have their own network but purchase messages, voice minutes and data from the MNO at a much lower price in wholesale. They either bill

their own customers via OSS/BSS software or rely on the MNO's usage information for billing.

- **A Mobile Virtual Network Aggregator (MVNA)** aggregates many small MVNOs to connect to the mobile network operator (MNO) as a wholesale customer and buy packages at wholesale prices. MVNAs therefore typically need their own OSS/BSS to provide accurate billing information to the connected MVNOs.

- **A Mobile Virtual Network Enabler (MVNE)** offers the same services as an MVNA so that MVNOs can structure themselves and offer their mobile services over the MVNE's infrastructure - that is, without their own network. Mobile network operators (MVNOs) have access to OSS/BSS thanks to their MVNE to order and bill for their services. A mobile network operator (MNO) can completely outsource its network tasks to a mobile virtual network enabler (MVNE).

Differentiation potential for cloud providers

"We were satisfied with the AWS offering for a certain period of time," explains de Wild. "However, over time the scaling proved to be difficult – in particular regarding increasing expenses, which ultimately were no longer appropriate when scaling up the company. We place a great emphasis on transparency and calculable costs." In its cooperation with AWS, Simfony also lacked sufficient individual advice on technical questions, and did not receive the support from customer service that they needed. Therefore, a future provider had to offer more extensive support. One additional requirement was fail-safe data centres, because the SIM cards used require a backend with a high SLA value. In IONOS Cloud, Simfony found a reliable cloud partner that stands out with its fair price-performance ratio, transparency and service advantages. Simfony was already familiar with IONOS because it

had previously used its VMware-based cloud server. Not only did the changeover bring the desired flexibility and scalability, Simfony also found that IONOS Cloud was tailored even more closely to enterprise needs than expected.

The implementation

In autumn 2020, Simfony began successively migrating parts of its systems to IONOS Cloud. "In the process our developers became particularly keen on the IONOS Cloud Data Center Designer," says de Wild. "It meant we could appropriately configure our virtual data centre because the cloud makes it really easy." But it's not just the Data Centre Designer that has been beneficial for Simfony – the German cloud provider also shines with its service range. "From the very beginning we could rely on the cooperation with and professional advice from IONOS," adds de Wild. "Alongside upfront professional services, this primarily relates to technical customer service during the migration, and also during live operation. You notice that the range has been tailored to enterprise needs."

One particular feature of IONOS Cloud is indispensable in an IoT environment: balanced performance over longer periods of time. Communication between the Things should not only be uninterrupted, the quality of data throughput must remain as constant as possible too. Not every shared resource can manage this.

IONOS Cloud Data Center Designer

Flexible cloud configuration is an important step towards sustainable and secure IT. The IONOS Cloud Data Center Designer (DCD) provides support when building a virtual data centre. The DCD has a browser-based, graphic user interface and gives users all the tools they need to create their own virtual data centre quickly and to adapt it if necessary. Users can build up their IT infrastructure to meet their individual requirements. The benefits at a glance:

- **Live Vertical Scaling** makes it possible to scale resources using a slider.

- **Storage** allows the number of HDD and storage units to be freely chosen – servers can be conveniently allocated the required storage capacity or CD-ROM drives with just a few clicks.

- **Networking** allows connections to be made between servers and internet accesses using a cursor.

- Companies can use all **servers** so they fit their needs; cores and memory can be freely configured.

- **Firewalls** ensure the infrastructure is secure.

- **Load balancers** can be easily added to distribute the processing load across different servers, thus avoiding load peaks.

The benefits

Migrating to IONOS Cloud has brought Simfony numerous benefits. Here's an overview:

- **Flexibility:** IONOS Cloud enables Simfony to scale cloud resources flexibly at any time. So both upscaling and reducing resources are possible as required.

- **Data security.** This issue of data security is a top priority at Simfony, which has the relevant ISO certification. Simfony is in safe hands with IONOS Cloud, because the cloud provider hosts customer data exclusively in ISO-certified data centres. This means that not only its own data, but also that of its customers is protected against unauthorised third-party access.

- **Simplicity:** The Data Center Designer makes work easier for the Simfony developers.

- **Transparent prices:** Simfony also benefits from the straightforward price model of IONOS Cloud. Billing is based on only four price parameters (cores, RAM, memory and traffic) and is calculated according to consumption and by the minute. IONOS Cloud is characterised by fairness and transparency.

- **Professional service:** Joachim de Wild describes the collaboration as extremely positive: "We are really delighted with the cooperative partnership with IONOS. We especially like the quick contact with English-speaking employees, who have the necessary specialist expertise to be able to advise and support Simfony properly. Joint solutions are always found for any challenges."

Cloud Compute and Storage Performance Analysis 2020

Cloud Spectator – an American consulting and benchmarking firm specialising in cloud computing – put the largest cloud providers to the test in its "Cloud Spectator Benchmarks 2020". By doing so, the company aims to bring more transparency to customers in the IaaS cloud market. The result: on average, IONOS Cloud Compute performs 70 per cent better than the leading competitor. The results can be viewed here: https://cloud.ionos.co.uk/reports/cloud-spectator-price-performance-benchmarks.

Conclusion

Simfony and its customers now benefit from flexible, uncomplicated and scalable cloud resources. SLAs at a high level and the user-friendly IONOS Cloud Compute Engine won over the company. Simfony wants to successively migrate additional parts of its range to IONOS Cloud, especially once the German cloud provider has built up and dispersed its range of data centres even further. This would support Simfony in providing even better ranges for its customers, because digitisation and IoT transcend borders – with 5G accelerating the trend even further.

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