



Summary

PROJECT

“DRO” – Data, Reports, Organisation

CHALLENGE

Secure deployment of a rapidly scalable solution for efficient data capture and analysis

RESULT

A container- and cloud-enabled solution was developed based on InterSystems IRIS. This solution can be made available to employees as a software-as-a-service.

Zinitrionic Suisse AG + BEGASOFT AG

Data Management Using Containers and the Cloud: InterSystems IRIS Simplifies Reporting for the Reformed Churches of Bern-Jura-Solothurn

Partners Zinitrionic and BEGASOFT are jointly responsible for the development and operation of the software.

Digital transformation is changing many aspects of society, which naturally includes religious communities. The case study of the Reformed Churches of Bern-Jura-Solothurn demonstrates the benefits that can be reaped from efficient data management and analysis, containerization, and deployment of the solution in the cloud. The modern GemFin e-government financial management application delivered the base technology on which the “DRO” (Data, Reports and Organization) solution is built. Zinitrionic, BEGASOFT, and InterSystems jointly implemented the project.

Swiss software provider Zinitrionic Suisse AG, who has been a close partner of InterSystems for many years, implements customized solutions built on InterSystems’ technology for its customers. As part of the project commissioned by the Reformed Churches of Bern-Jura-Solothurn, Zinitrionic recently developed a container- and cloud-based solution that draws on the corresponding functionalities of the InterSystems IRIS data platform. Moreover, the data platform ensures high performance, interoperability, and unlimited scalability. Zinitrionic is well familiar with these special features of InterSystems’ data technology because they have been developing e-government applications on this basis since 2001. These are bringing added efficiency to the “Directorate of the Interior and Justice” (Direktion für Inneres und Justiz) and the “Judiciary of the Canton of Bern” (Justiz des Kantons Bern), among others.



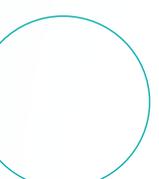
Data Management and Analysis in the Municipalities

Zinitrionic implemented a solution for the Reformed Churches of Bern-Jura-Solothurn that allows users to efficiently collect data and analyze it in a targeted manner. Employees use the software to input data and analyze (graphs and tables) liturgical services, financial figures, and volunteer work. Based on their tasks and authorizations, they can also generate more extensive analyses, reports, and graphs. The application builds on the InterSystems IRIS data platform, which forms an essential component of the implementation,” comments Steffen Schnauffer, Chief Technology Officer at Zinitrionic. This is because the functions of the data platform enable the software to be operated in the cloud using container technology, just as the client requested. The solution implements two containers that are strictly separated from each other but are mutually dependent. One of them executes the front-end of the solution, while the other hosts the back-end and the data platform. If required, additional containers can be added flexibly to handle peak loads.

Advantages of Containerization

The decision to containerize the solution was made due to the numerous advantages this type of software deployment offers. “This method also allows us to apply the DevOps principle, which improves the quality of the application since new code always undergoes automatic testing – and this, in turn, reduces the risk of error;” says Schnauffer. Developers write code, test it locally, and then commit it to the build server. If it passes the test there, it will be deployed automatically, which helps to avoid errors. At the same time, developers can pack a new version of the software into a single discrete container and perform extensive testing without affecting the performance of the live system. However, in order to allow for this, the application and its data need to be strictly separated from each other. This is achieved by splitting the containers in the back-end. This means that each container in the backend serves a different purpose, such as running the production system in one and using the other to test upcoming solutions, for example.

And there are more benefits as compared to other development and deployment options: The release cycles are accelerated by a substantial margin. Thanks to extensive automation of the test and deployment process, small or even major changes can be implemented quickly and then committed to the live system. Another key benefit of containerization is the unrestricted scalability it offers. This makes it possible to react flexibly to usage fluctuations during operation. Whenever the number of users rises quickly, additional containers can easily be added to boost the system performance in response to peak loads. “In combination with the Kubernetes and Rancher container management software, which are available at BEGASOFT, the system itself can do this automatically and later shut down containers that are no longer needed. This provides additional convenience;” explains Steffen Schnauffer.



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Chief Technology Officer
at Zinitrionic*



Deployment in the Cloud

The solution is made available to users in the congregations of the Reformed Churches of Bern-Jura-Solothurn as a software-as-a-service (SaaS) in the cloud. This ensures easy and convenient handling thanks to the native cloud capability of InterSystems IRIS. “However, Zinitrionic does not operate the cloud itself. Instead, the hosting service is performed by a third partner. We chose the highly reliable experts from BEGASOFT for this task,” says Domenico Valentini, Managing Director at Zinitrionic. The independent IT service provider BEGASOFT operates the solutions of customers and partners in its own data center in Bern. “The product is integrated into a larger Swisscom data center, which is one of the most modern data centers in Europe,” points out Stephan Berger, who is in charge of sales and consulting for cloud and datacenter products and holds a seat on the executive board and the supervisory board at BEGASOFT. BEGASOFT’s customers and partners hail from various sectors. In the public sector (in Switzerland, the federal government and the cantons), for example, the IT service provider assists authorities with e-government projects, i. e., the digitization of governmental processes. In addition, BEGASOFT serves numerous companies from a broad range of industries including health care, general industry, IT, banking, and insurance. BEGASOFT is ISO 9001 and ISO 27001 certified. The BEGASOFT data center in Bern holds various certifications, including TIER IV.

Forward-Looking Model

Deploying the solution in the cloud is a forward-looking strategy. Many companies and organizations no longer want to install and operate solutions themselves. They prefer to leave the task of administration to a competent partner with extensive experience, such as BEGASOFT. The ability of the cloud provider to respond rapidly is also important in this context: Zinitrionic has direct access to BEGASOFT experts who can be reached very quickly when the need arises. In contrast, well-known major players in the cloud industry often lack this quality of service. Moreover, the solution hosted by BEGASOFT runs in a private cloud. Accordingly, control over the application and its IT infrastructure remains entirely with Zinitrionic. “As our data center is located in Switzerland, the software is also subject to strict data protection law. In addition, we maintain a high level of technical reliability by complying with equally stringent standards,” explains Stephan Berger.

Future Cooperation

The next logical step for Zinitrionic is to build more solutions for existing and new customers on the InterSystems IRIS data platform, then containerize them and take them into the BEGASOFT cloud. In this context, the task performed for the Reformed Churches of Berne-Jura-Solothurn can be seen as a pilot project that successfully demonstrated how applications can be developed and deployed more easily by taking a modern approach.

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