Danfoss Climate Solutions Chooses Crunchy PostgreSQL for Kubernetes to Service IoT Sensor Data

Open-Source Migration

78% cost reduction

Danfoss is a multinational company with engineering products spanning the climate and power industries. The Danfoss Climate Solutions segment focuses on the green agenda in attractive global markets and has developed Alsense®, a cloud-based SaaS for supermarket energy management. Alsenese monitors refrigeration and HVAC equipment to alert stores of food loss, equipment malfunction, and provide data for optimizing equipment and resources. Sensor data flows from a temperature probe to a store gateway and into Postgres databases optimized for time series storage.

Challenge

While working on renewing its Food Retail Enterprise Service Alsense platform, the Danfoss team needed to decide on a new database to store sensor data from thousands of supermarkets located all over the world.

They were coming from a monolithic Java EE application backed by Microsoft SQL Server and wanted a complete modernization with Kubernetes microservices. They chose to work with Azure Kubernetes Service (AKS) but they wanted additional features with the database to scale the system and manage a production-ready environment beyond the built in AKS features. Danfoss' core technology team for climate solutions wanted to work with Postgres because the developer team was most comfortable with its SQL standard protocol and ability to handle IoT datasets. Danfoss needed a way to operate several database clusters on Kubernetes, keeping a streamlined developer and operations experience.

Danfoss reviewed other Kubernetes operators on the market. In testing other Postgres Operators, they focused on backup functionality, disaster recovery, and high availability. In the end they chose Crunchy PostgreSQL for Kubernetes.

Solution

> "By partnering with Crunchy Data, Danfoss was able to move away from over-engineered Microsoft SQL servers that were manually operated, to a cloud-native self-driving way of deploying and operating database clusters. Danfoss is also making use of the features in the PGO 5x series release, benefitting from the fully declarative GitOps model."

By partnering with Crunchy Data, Danfoss was able to move away from more expensive Microsoft SQL servers that were manually operated, to a cloud-native self-driving way of deploying and operating database clusters. Danfoss is also making use of the features in the PGO 5x series release, benefitting from the fully declarative GitOps model. This change in strategy has resulted in massive cost savings in terms of license costs and operational effort required. Danfoss estimates a savings of 78% on monthly operating costs by switching to Postgres.

> "Danfoss is pleased with the decision and with both the capabilities of the product and the responsiveness of the Crunchy Data technical team," said Nils.

Danfoss plans to scale its Postgres operation as it builds and deploys this product all around the globe, delivering best-in-class performance for customers. Danfoss estimates a savings of 78% on monthly operating costs by switching to Postgres.

"In reviewing other operators in the market, we realized that none of them were as mature as Crunchy Data's. The functionality around backups and overall stability wasn't there. They were not really production-ready like Crunchy."

Nils Tolle
Head of Core Technology

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