Cloud Native, Platform Agnostic PostgreSQL-as-a-Service

SAS, the world's largest privately held software organization, has been a trusted analytics powerhouse for the past 40 years. Through innovative software and services, SAS empowers and inspires customers around the world to transform data into decisions. SAS helps its customers to turn complex data into usable insights, make more intelligent decisions, and drive relevant organizational outcomes. With customers in over 140 countries, SAS software is installed at more than 83,000 business, government and university sites and is used by 91 of the top 100 companies on the 2019 Fortune 500 list.

Build vs. Buy for cloud-native solution

SAS was refactoring its flagship analytics engine, SAS Viya, to align with the latest cloud technologies. This required a new challenge of re-architecting workloads to run in containers with Kubernetes orchestration.

When it came to a cloud native database-as-a-service on Kubernetes, the SAS team faced the classic "build vs buy" decision. As a software development powerhouse, SAS had the in-house expertise and tools required to containerize their software components, but when it came to the infrastructure database, the team had to decide whether to containerize an open source distribution of Postgres, or to leverage one which was prebuilt and tuned for its needs.

Crunchy PostgreSQL for Kubernetes customized and tuned for SAS Viya users

After much research, testing, and ROI analysis, SAS determined that the best use of resources and time would be spent by partnering with Crunchy Data to ensure Postgres was tuned specifically for the next release of SAS Viya. Crunchy's PostgreSQL Operator for Kubernetes and extensive Container suite offers integration with standard, open source tool sets for monitoring and performance optimization. Additionally, the ability to customize the Crunchy PostgreSQL Operator and leverage custom configuration maps provided SAS the flexibility it needed to tune and size the database based on the varying requirements of customers, supporting SAS Viya's diverse set of analytics workloads.

The Crunchy PostgreSQL Operator is able to ensure container deployments with defined resources that are configurable to meet specific customer needs. This prevents resources from being under-provisioned, thus ensuring a consistently performant product experience - a crucial requirement to maximize quality in SAS's new cloud-native architecture.

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SAS's choice to partner with Crunchy Data and leverage the Crunchy PostgreSQL Operator automates and simplifies SAS's deployment and management of PostgreSQL clusters on Kubernetes. The Postgres Operator specifically provides the features required to keep PostgreSQL clusters up and running, including: provisioning, high availability, DR, TLS, multi-namespace support, monitoring, scheduled backups, replication, cloning, node affinity, and connection pooling.

Working in concert with Crunchy Data gives SAS the ability to leverage their existing knowledge around Postgres.

The 5+ years of development Crunchy has put into its mature PostgreSQL Operator enables SAS Viya customers to leverage a cloud-native, platform agnostic solution that brings more control and less reliance on DBAs. With Crunchy Data's partnership, SAS is able to achieve its time to market goals and successful adoption of PostgreSQL as a Service.

"Crunchy Data has been a true partner to SAS. We have very specific needs from the Postgres Operator suite to achieve our desired customer experience. Crunchy Data has demonstrated a real commitment to work with us to meet these expectations. Overall, Crunchy Data has done an outstanding job in engineering, evolving, and supporting the PostgreSQL Operator, which in turn allows us to best serve our customers."

Bob Pacheco
R&D Manager of
Software Development

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