CASE STUDY

From hours to seconds: Provisioning data 720 times faster

SQL Provision

redgate

Santam, South Africa's leading general insurer, uses Redgate SQL Provision to deliver sanitized production data to its 13 development teams in seconds, saving 95% of storage space.

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"We have 13 developer teams who work on both application and database code"

Mark Fuller, IT Development Manager

The customer

Founded in 1918, Santam is South Africa's leading general insurer. With operations in South Africa, Namibia, and other international markets, it provides direct-to-consumer and commercial insurance to more than one million policy holders, through five business units.

To manage customers and policies, Santam uses Guidewire, a property and casualty insurance platform. Since the system needs to be continuously adapted to company-specific and market-specific requirements, Santam employs a dedicated team of 100 people. The team, led by Mark Fuller, is divided into 13 sub-teams each made up of Developers, Testers, Business Analysts, and Architects. These teams are supported by three Database Administrators, two Release and Config Coordinators, and a Technical Infrastructure Team.

Santam

13 DEVELOPMENT TEAMS

6 PRODUCTION DATABASES

7.5TB PRODUCTION DATA

"Restoring databases for development environments used to take between four and six hours"

Christine Dahl, Senior DBA

The challenge

The team used to test new code in a maintenance environment accessible only to a restricted number of developers. This environment used to be regularly refreshed by restoring databases from their backups, taking on average four to six hours each time.

For functional testing, the team used a performance environment which was a close replica of the production environment both in terms of technical specifications and data quality. The same process of restoring from backups was used to refresh the database environment for performance testing.

When datasets containing personally identifiable information were needed for testing, the team had a process in place to remove all the confidential data in that environment. This practice, while necessary to maintain compliance and respect customer privacy, resulted in less reliable data for testing because the new environment would not completely represent the data in production.

"Developers or testers would have to come to me or the technical architect every time they needed access to a new environment." says Johan Opperman, Release and Config Coordinator. "Then I would ask our DBAs to restore the data. With 13 teams requesting new environments, it meant that we had a dependency on the DBAs, whose priority is to keep the production environment up and running, rather than provisioning and maintaining test data."

This way of provisioning was significantly slowing down the development and release processes. Especially when an application deployment would fail and it require a restore of the database to a pristine point. In a situation like this, it would usually take six hours before the teams could work on the deployment again.

"With SQL Provision, we would have saved two to three months on a project we were working on at that time."

Johan Opperman, Release and Config Coordinator

The solution

In November 2018, while working on a complex project, Blue Turtle, a leading South African enterprise technology company, approached the Santam Guidewire team to discuss the benefits of data virtualization for test data management.

The project that the Santam team was working on required the complete restore of their production database once or twice a week, taking about two days each time. The team quickly realized that working with virtualized databases would have shortened the project timeline and effort by two to three months, so they were eager to investigate a solution to adopt.

After some investigation, SQL Provision proved to be the solution that was best aligned to Santam needs, as it meant the team could:

- Shorten the time to provision test environments.
- Reduce the local disk space required for developers to work in dedicated database environments.
- Give the development teams independence to self-serve new data for development and testing environments.
- Obfuscate personal information to comply with data privacy regulations such as POPI and the GDPR.

Tyrone Nel, Senior Solutions Architect at Blue Turtle, ran a Proof of Concept (POC) to confirm that SQL Provision performed as expected and exceeded expectations on all the parameters the team set out.

The time saved to create virtual copies of all environments using SQL Provision was well under the 10-minute target set in for the POC. In fact, it took less than one minute to create clones of the Performance and Maintenance environments.

The POC also proved that the personally identifiable information included in the virtual clones could be masked, making the process compliant with privacy and information security requirements.

Finally, the ability to define user access controls demonstrated that individual teams could efficiently and safely self-serve copies of the environments for development and testing.

"It's amazing to work with Redgate's SQL Provision technology, I see first-hand the profound and positive impact it has on teams striving to accelerate and achieve Compliant Database DevOps." says Tyrone Nel, Senior Solutions Architect at Blue Turtle.

After the successful POC, Santam worked with Blue Turtle and Redgate to fully implement SQL Provision. "It's really been great", says Senior DBA Christine Dahl, "I was surprised how easy and well it actually works. The documentation was clear enough, our support queries were dealt promptly, and the product is easy to install".

The results

"SQL Provision has enabled us to deliver reliable data environments 720 times faster, and since its introduction we haven't had a single request from the teams, they are self-sufficient" says Johan Opperman. "Every team has its own development environments, some have two, some have three. It's really up to them and the work they need to do".

The Release and Config Team is now in charge of creating new images, but each of the 13 development sub-teams has direct access to the creation of fresh new clones. What used to take between four hours and two days each time, is now done in just seconds, and without the intervention of Johan's team or the DBAs.

Through the central UI, Christine and the DBAs can easily monitor the number of copies being created, where these are located, what data they contain, and who is using them. It also allows her to manage all user access rights and permissions.

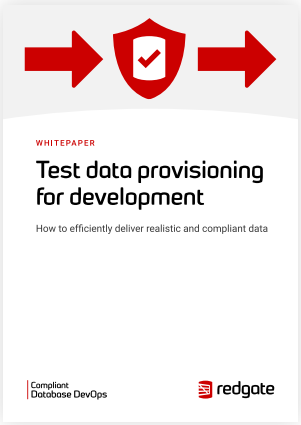
With hundreds of active cloned databases, of which about 60 are full production datasets, the team has managed to reduce the storage for development and test environments by approximately 95%.

The immediate access to sanitized production data has made it easier for the team to test their changes and increase pass rates. Previously the team would have to wait six hours for the data to be restored after a deployment failure, now they can just reset the database to a pristine data point in mere seconds, significantly reducing the time for testing.

If releasing every two weeks was previously seen as somewhat stressful, the immediate refreshing of environments now gives plenty of time for the teams to test and deliver better code.

"We have come a long way in the lifecycle of software delivery. SQL Provision has increased the automation of the release process, and fully supports our Agile approach. This means that we can deliver better software, faster" concludes Mark Fuller, IT Development Manager, Santam.

Next steps



Test data provisioning for development

As database teams grapple with shortening release cycles and tightening data protection laws, the need to deliver realistic and compliant test data to development quickly and safely is greater than ever.

Review the most common approaches and their pros and cons in this free whitepaper.

Get the whitepaper

SQL Provision

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