CASE STUDY

Issues resolved faster and increased value-added work

Redgate Monitor

redgate

Contents

The Customer

TruStone Financial is a full-service credit union with assets of over $5.4 billion and a mortgage servicing portfolio in excess of $2 billion. In 2024, TruStone was named a top-performing U.S. Credit Union by Newsweek.

The Challenge

Relying on a homegrown database monitoring solution was creating downtime, directly affecting members. Ensuring security and compliance was time-consuming and error prone as the company grew.

The Solution

Maximizing uptime was a priority to limit impact on members. By introducing Redgate Monitor the team can proactively resolve issues, and minimize downtime with real-time data and custom alerts.

The Results

The DBA no longer starts the day spending hours identifying what problems may have arisen. There's been a huge reduction in downtime, time to resolve issues and ensure compliance, allowing the team to deliver real value.

> “Any time that we had downtime or issues arose, it wasn't just an employee problem because that system problem would trickle down to our members.”
>
> William Boutwell, Lead DBA

The Customer

Back in 1939, eight Minneapolis teachers took control of their own financial security by forming the Minneapolis Federation of Teachers Credit Union. Since then, the credit union has expanded across the Midwest, seen the name change to the current TruStone Financial, and now employs over 600 people across 23 branches.

A merger with Firefly Credit Union, Minnesota’s first financial cooperative, made it the second largest credit union in the state, with current assets of more than $5.4 billion. As a not-for-profit financial institution, it differs from a bank as its members, who live, work, study, or volunteer in the membership area are owners, and profits are returned as competitive rates, higher investment returns and lower fees.

The core IT Structure Team consists of around 50 employees across architecture, development, data science & analytics, front & back office, and infrastructure roles. William Boutwell joined TruStone from Firefly Credit Union as part of the merger and, as the company grew, became the Lead DBA responsible for the entire database estate, across on-premises and Azure.

> “With more knowledge and less siloes, it just makes everything flow so much better.”
>
> William Boutwell, Lead DBA

The Challenge

The IT Structure Team had developers with advanced knowledge across SQL, PowerShell, C#, and SQL Server Integration Services (SSIS), which enabled them to create a homegrown database monitoring solution. They took all of that knowledge and created SSIS packages for monitoring that were tied into the pager roles in SQL Server and would push notifications out.

For a while, they thought they had it down to a T as they knew when there was an issue or when a database wasn’t communicating correctly. The problem was that it was unbelievably tedious. Everything had to be configured by hand and, although they were alerted if services were down, they had no information on the cause, which would require manual investigation.

One batch job set up by the team to push data to the Data Warehouse consisted of around 65 steps and would move roughly one terabyte of data in 45 minutes. With their database instances varying between 20 and 30 terabytes, this one job would take days to complete. But time constraints weren’t the only issue with such processes; employees had a mindset that if they knew how everything was set up and kept it to themselves, their job would be safe. Knowledge was siloed not only within teams but specific individuals, and this posed a huge risk if that individual was to move on.

Working reactively with an upcoming merger

As a team they were working reactively to reconcile issues as and when they were alerted to them. The time taken to identify and resolve the issues meant they were seeing increased downtime, not only affecting internal teams, but members directly. As William explains: *“Our members are our most important assets. We’re nothing without our members, so as soon as we were alerted to something we rose to the occasion, to make it right, but by this point it was often too late. Members had already been impacted.”*

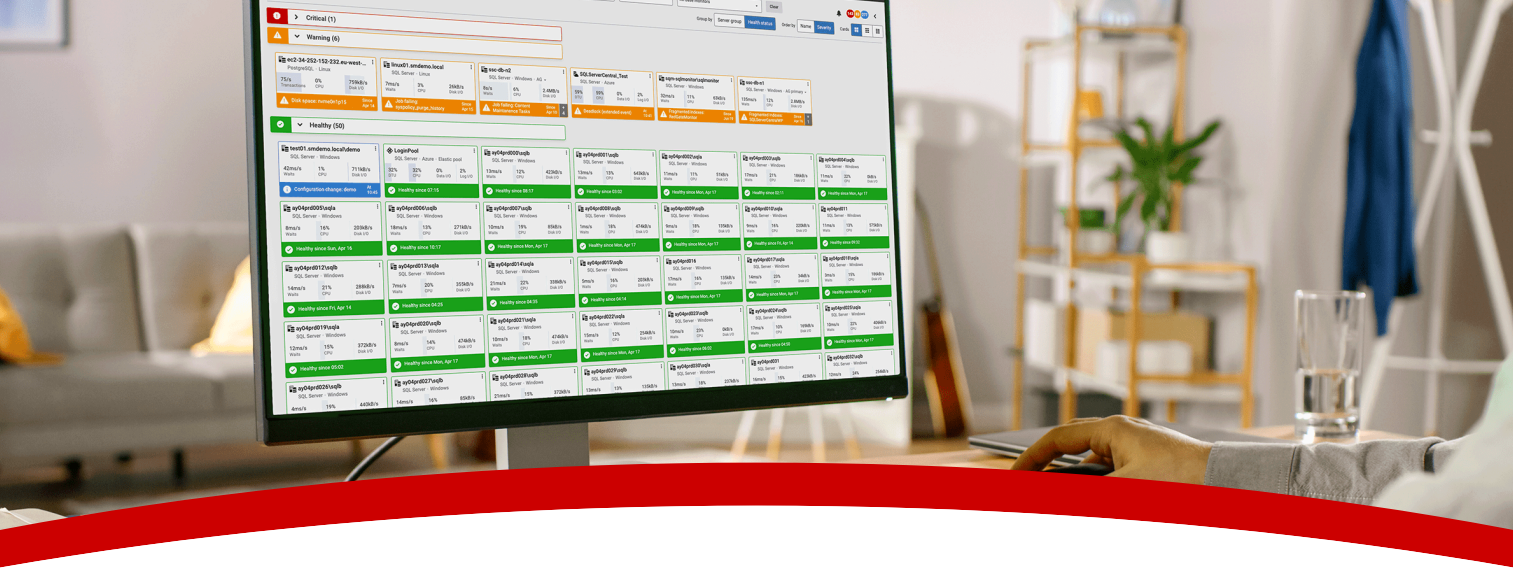
With an upcoming merger about to increase the team size and structure, plus growth across the amount of data, the complexity of the database estate and number of applications being managed, something needed to change. That was when they started looking to see what third-party solutions were on offer and discovered Redgate Monitor.

> “Redgate Monitor helps keep our security permissions up to date and has reduced reporting time by 95%.”
>
> William Boutwell, Lead DBA

The Solution

The priority leading up to and throughout the merger period was to maximize uptime and minimize member disruption. William knew that the implementation of a third-party monitoring solution was the key to achieving this, and he moved ahead with selection and purchase of their preferred choice. He outlines that although not an issue for him, at some organizations getting executive level buy-in for such a purchase can be an issue, but at the end of the day you have to ask: *“Do you care about data? Because data is the most valuable thing that we have, and we need something to look at it.”*

William knew they needed an established solution that could be configured to the specifics of their estate, as he outlines: *“We did our due diligence, set up meetings, and looked at other competitors, but as soon as we saw Redgate Monitor, everyone knew this was the product for us. The other products didn’t have the clear vision, the support, and when I saw the first pages of documentation I almost cried with happiness.”*

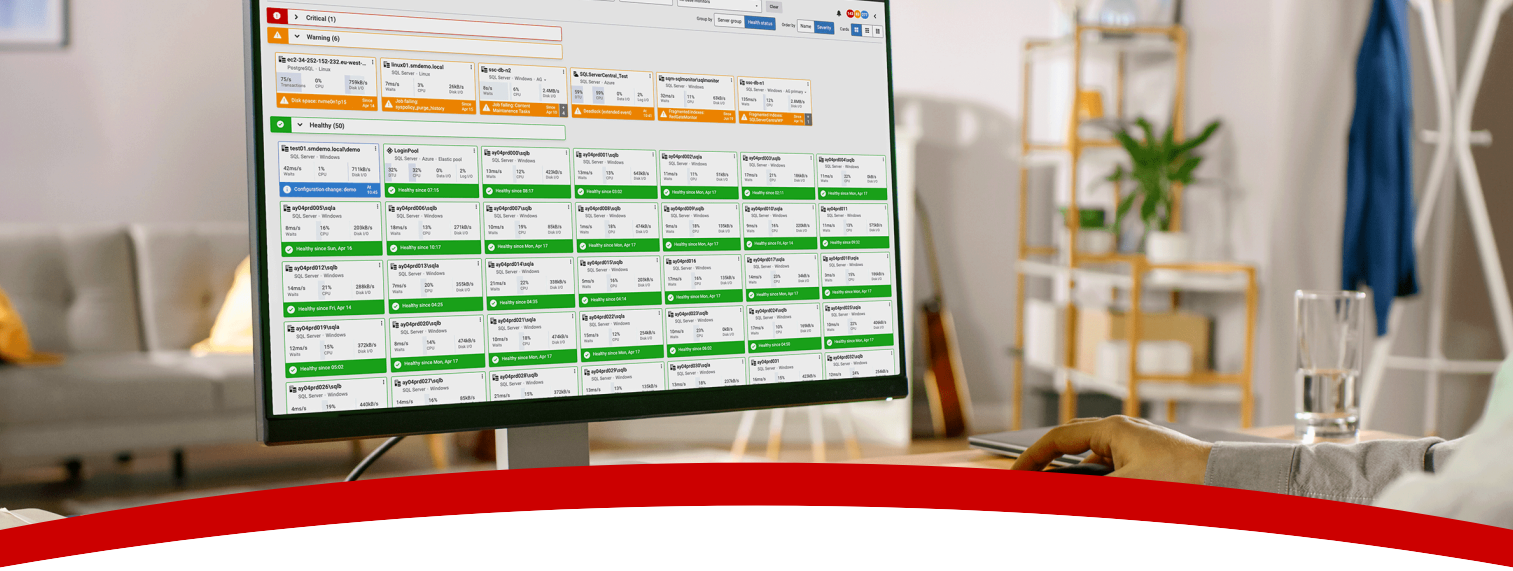


Visibility and insight

Redgate Monitor created visibility on both sides of the merger, enabling estate-wide configuration and reporting to gain insights and reduce the time to resolve issues. Throughout the merger, as they transitioned systems from one domain to another, they also used Redgate Monitor to categorize which systems were already shared and those that needed to be moved over. They implemented the solution across the two different domains and were then able to look at the estates, configurations, and reports to identify what was in both environments.

The agile team then looked into data optimization and rationalization and were able to identify where databases could be combined to an instance, rather than dedicated instances per application. This meant that even though they had combined two companies and massively increased the amount of data held, they reduced their overall SQL licensing requirement by 25%.

Following the merger announcement, the team knew that they were going to be taking on a lot of extra SQL servers. The big things they wanted to accomplish were reducing the time to restore and communicating to the wider business the value of backing up data.



William outlined that the Credit Union has two approaches to this. They either do everything through batches, which create a daily backup as standard, or the time-critical data from the government, card transactions, and through the clearing house needs to be backed up immediately. Once they had Redgate Monitor set up, they took the alerts and transitioned them into their agile process. Now they are at a place where they have over 95 databases that can be restored to the exact second that something occurred.

Security and compliance

Following the success of the Redgate Monitor adoption, the team upgraded to the Enterprise edition of Redgate Monitor to streamline security and compliance which had become increasingly time-consuming and error prone as the company continued to grow. This upgrade enhances database security and compliance with permission controls and server configuration templates. It replaced a manual approach to ensuring configuration compliance and checking permissions to ensure data integrity. William notes, *“Thanks to Redgate Monitor, I can quickly see who has access to our databases. In just 2 minutes, I know exactly which permissions are in place. It’s a game-changer for our team’s efficiency.”* Regarding the configuration templates, William adds, *“Redgate Monitor helps us quickly identify servers with non-compliant configurations.”*

The Results

Redgate Monitor was first introduced from an infrastructure standpoint, so just a few of the team had access right away. They wanted to initially address the backup requirement and ensure that all of their servers were being monitored. Then they opened the tool up and demonstrated it to others across the organization, assigning access to more employees.

Many just use it for the alert monitoring as they work inside applications, but the development team and data analysts now use it much more in depth. They'll see a long running query or deadlock as they're writing SQL code, for example, and dive in to understand where they can alter their code to make the process pipeline faster. As William explains: *"This cuts down processing time, freeing up resources so that we can do more with what we already have. And that was all through this tool."*

"Redgate Monitor is a fast, intuitive, and scalable tool that also provides database insights to our application and development teams, helping optimize queries effectively." William Boutwell, Lead DBA

Monitoring a hybrid environment

Managing a hybrid environment, William now uses Redgate Monitor to see what applications they can migrate to the cloud based on their size, and especially their input and output (for how much data is going between them), as solutions charge on that basis. He can look at which databases would benefit from being hosted in the cloud, and then use the insights from Redgate Monitor to identify how big the databases are and what kind of infrastructure they would need to stand it up in the cloud, William highlights that: *"This discovery phase just shrunk, because in 15 seconds I can say this is the database size, these are the recommendations, pick a bracket for the cloud and then start standing it up to Azure right away."*

"Redgate Monitor has successfully guided our shift of databases to Azure"
William Boutwell, Lead DBA

There are advantages for the quality of service being delivered to members too. The last thing any financial organization wants is for a member to be at a store and their card not work, or to look at their mobile banking app and see a blank screen, or for their personal data to be breached. If potential issues touch any point of data throughout the database environments, there need to be alerts in place. Now, if William and the team receive a red alert, they know something's going on and if they don't act on it, it could affect members, which is what they ultimately want to avoid.

As William explains: *“If we didn’t have Redgate Monitor, issues would have triaged up to the member, and that member would have been impacted. Having Redgate Monitor has been imperative to how we operate as a business.”*

A mindset shift

The mindset within the team has also seen a shift. From the previous desire to hoard knowledge in a bid for job security, Redgate Monitor team members have been able to upskill and develop their knowledge through the ability to drill into the data, gain a true understanding of the causes and identifying the best fix.

With the time saved on manual tasks, the team have been freed up to prioritize new projects and deliver value, in line with their vision to create exceptional financial experiences for members. As a result, staff turnover has dropped with employees more engaged in their roles, able to develop their knowledge and progress within the team.

A deeper dive into how Redgate Monitor helped

Since implementing Redgate Monitor, one of the biggest wins for William as the Lead DBA is that he no longer needs to come in to work, open every SQL Server instance and query all of the activity monitor jobs to see which ones have failed. There's also no more trawling through emails to identify which backups didn't make it, and which transaction logs broke the chain. Instead, William can simply have the Redgate Monitor tab open to see the status across their entire estate. *"It's cut my time exponentially; I would say it saves me an hour at least every single day. While our developers are saving two, three hours of development time."*

Clear insight

The team can set up their own expectations and use Redgate Monitor to validate it. The insights show in a very concise, clear manner if something is an issue or out of the standard recommendation. There have been times that William and the team have utilized the data from Redgate Monitor to prove that an issue is not a problem with their product and service. With the dashboard they can clearly see whether something needs to be adjusted, as William explains: *“We’ve actually had some huge vendors change their entire installation, or how their operating procedures go based on the data that we fed them through Redgate Monitor.”*

One example of this was an ETL process from the data warehouse which wasn’t properly using the degrees of parallelism, and the machine had four Intel Xeon CPUs. After they changed it through their default, they were able to spread the load and have that process cut down hours of time, as well as avoid peaks in CPU usage.

Security and compliance

As TruStone Financial continues to grow and evolve, the need for robust security and compliance measures has become increasingly critical. Maintaining stringent security protocols and ensuring compliance with finance industry regulations are paramount to protecting their members and operations.

To address these needs, TruStone Financial sought a solution that could monitor database performance and scale effectively with their operations. They also required comprehensive security and compliance features, all integrated into a single tool. By integrating Redgate Monitor, TruStone Financial has not only strengthened its security and compliance posture but also achieved greater operational efficiency and peace of mind.