

Cloud Migration and DevOps Case Study

with Rising Medical Solutions



A national medical-financial solutions company, Rising Medical Solutions provides medical cost containment and medical care management to the workers' comp, auto, liability, and group health markets as well as publishes the annual Workers' Compensation Benchmarking Study.

The Challenge

Rising Medical Solutions was approaching a fork in the road: stay with its Chicago on-premise data center housing 25 TB of data—predominantly comprising enterprise SQL servers and .NET web services and batch applications—or make the move to AWS in the cloud?

Why? It was time for a significant hardware refresh and software true up. Staying the course would require a significant financial outlay, but was it better to remain with the tried-and-true on premise configuration or take this opportunity to migrate to AWS?

A host of needs had to be factored in:

Scalability: Rising needed a highly scalable solution. The company was adding up to 10% more data every time it onboarded a single new customer which was causing system challenges.

Performance: Optimizing speed and efficiency to process medical claims faster was a must. Errors and timeouts also had to be minimized, while visibility into an error's root cause had to be maximized so Rising's IT staff could resolve issues quickly.

Deployment: For software updates, deployment was often time-consuming with configurations in multiple locations. Rising required common and consistent procedures to speed and automate this process.

Security: Rising's HIPAA compliance requirements made security vitally important for the company. Key security needs included a single centralized view into permissions and roles across enterprise systems.

Central Management: Environment configurations were disparately located, so centralized management was a requirement.

The Solution

Rising turned to Uturn Data Solutions, a consulting group they had worked with in the past. Collaborating closely with Uturn Data, Rising's IT staff was able to create a Total Cost of Ownership analysis regarding the move to AWS. They were then able to make a compelling case to Rising's executive management and the company opted to migrate to AWS.

Rising and Uturn Data agree this was more than just a "lift and shift" operation, but rather a well-planned migration—re-architected from start to finish—that would enable Rising to not only meet its goals but also independently manage its data internally going forward. "We wanted to use Uturn Data for their greatest strengths: architecture and design in the AWS cloud," says Dan Trahan, CIO, Rising.

The goal was to equip and empower Rising's IT staff with the tools to handle fixes internally, so they could go beyond the "break/fix" cycle towards more exploration and innovation. First, Uturn selected Terraform for its end-to-end infrastructure delivery and configuration. For the SQL servers, they migrated from 2008/2012 to 2016/2017 including AlwaysOn Availability Groups to ensure high availability and AWS DMS alongside Amazon Aurora for read replica replacement.

Another essential element was the modernization of certain applications — predominantly for processing the high volume of client medical claims. Uturn Data leveraged TeamCity to run, build, test and deploy the apps—which must be updated frequently with as little disruption as possible. AWS CodeDeploy and Auto Scaling Groups were instrumental for achieving zero-downtime deployments. To further automate and optimize processes, Uturn Data transitioned Rising's batch applications to a centralized scheduler process. In the final months prior to the cut over to AWS, Uturn Data focused on testing and implementation—a high-stakes endeavor as the upcoming move would leave little to no room for error. Rising's migration would take place over a single weekend; the model they had created was not designed for a phased move. The pre-cut time was therefore spent ensuring the cut-over went smoothly.

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And it did. The way Uturn Data set up the staging –using templated environments–was the key to success. This was clear at the joint Uturn/Rising post-cut meeting the following Monday morning. “It just made everything seamless,” says Trahan. “Uturn Data’s expertise and guidance was a huge factor in the success of this project. I am thoroughly impressed with how well the migration was executed.” For Uturn Data’s Director of Cloud Architecture Travis Langhals, Trahan has high praise: “I have not known anyone who knows AWS better than him; he is the most knowledgeable resource I have ever met.”

The Benefits

The project was completed six months ahead of schedule and Rising was able to secure significant cash incentives due to the Windows Rapid Migration Program available through Uturn Data’s status in the AWS Partner Network (APN). The migration’s success took many forms for Rising—from boosting performance and enhancing scalability, to transforming software deployments and significantly reducing database errors.

A huge win: Rising has seen a 35% reduction in workflow processing time, translating to faster processing of medical bills after moving to the cloud. Before, “There were times when there would be a backlog and people would be waiting for the bills to process,” says Trahan. Now the firm regularly handles many thousands of bills a day with no backlog—a true game changer.

Other performance statistics are similarly impressive: Rising previously was averaging roughly 200 timeouts a week during normal production, a number that has plummeted to basically zero. Loading customer histories, a critical but at times problematic task, went from having 50 to 100 errors in a day down to zero as well. As for scalability, loading customer histories is no longer a concern given that scaling in the new environment is automatic,” according to Trahan. “We can handle it better and more easily, even when a customer adds 10% more data to our system.” And the greatly enhanced visibility of the AWS solution allows the IT team to identify the root cause of a problem—without external help and faster than in the past, which increases productivity.

High visibility is also critical for maintaining the level of security necessary for Rising’s HIPAA-compliant data. Deployment in the cloud? Yes, that’s transformed too. Prior to the AWS move, a typical deployment was one to three days, which has now shrunk to hours. “We recently did a release of our VISION software and I don’t even remember having a release go that smoothly. Everything is more efficient,” reports Trahan.

The monetary savings for Rising have been significant:

- \$250,000 in software savings. Notably, the company was able to downgrade from enterprise-level Microsoft SQL server licensing to much less expensive standard licensing.
- A 17% cost savings over the first several years post migration when compared to the cost of remaining on-premise and completing the necessary hardware and software upgrades.
- The AWS Compute Savings Plan will reap additional savings annually (roughly \$25,000) and other AWS programs will compound that savings.

But one of the most significant successes was the empowerment of Rising’s IT staff. Thanks to training—which began day one to familiarize them with terminology and the architecture to come—to the very end, the staff can handle almost any AWS issue, template change, or configuration that comes its way. “It was very successful,” reports Trahan who notes the staff spends relatively little time researching root cause or making changes in multiple locations. Full visibility, centralized configuration and template driven environments have taken us to the next level.

“We’re a service company and we don’t need to be in the business of running our own data center,” explains Trahan. “We would rather take advantage of an environment to run our services on and use our resources to support that.” Better still, it’s become a selling point for Rising. “Much of our business is based on customer referrals, so when a reference tells a potential customer that our systems run fast with minimal downtime, that goes toward getting new business,” Trahan explains. “We couldn’t be happier with what Uturn Data has provided as far as the project migration, knowledge and experience,” says Trahan.

About Uturn

Uturn is an Amazon Web Services Advanced Tier Consulting Partner specializing in Enterprise Cloud Enablement and Application Modernization.

We help our clients adopt and optimize cloud services to remove technical debt, prepare for growth, eliminate uncertainty, foster innovation, accelerate critical business initiatives, and become more efficient with their technology investments.

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