



CLIENT SPOTLIGHT

Members 1st Federal Credit Union



Enterprise Data Lakehouse empowers Members 1st with data management & accessibility for more specialized Member experiences

CHALLENGE

Members 1st Credit Union, a financial institution with an extensive membership exceeding half a million, embarked on a journey to enhance their operational efficiency and data management practices to continue to deliver highly personalized experiences to their Members. Traditional solutions like SQL Server and on-premises data warehouses presented challenges stemming from the sheer size and speed requirements of their data, as well as the siloed nature each system's data. SQL Server environments have limitations, including the ability to scale efficiently, leading to increasing costs and delays in data loading and request fulfillment.

The limitations of these conventional approaches became evident as Members 1st struggled to ingest, process and deliver increasing amounts of data in the speed needed to meet the demands of their dynamic membership base. Additionally, the need to be able to use other IT languages, such as Python for machine learning, posed further complexities in their goal of a comprehensive, institution-wide data solution. Members 1st currently uses R language heavily for machine learning and analytics, and although R support does exist on SQL Server, it's not nearly as well supported as on Databricks.

In response to these challenges, Members 1st recognized the need to transition towards a more adaptable and scalable architecture, and to develop an enterprise data warehouse leveraging Azure technologies, as an approach to overcome the constraints of traditional data management systems. By adopting this framework, Members 1st aimed to establish a unified data ecosystem with embedded data governance, capable of accommodating diverse programming languages, scaling seamlessly and providing a centralized single source of truth that would enable self-service analytics using Power BI. This shift would be more than just a technological upgrade; it would enable a transition in how Members 1st approached data, enabling them to unlock actionable insights and drive informed decision-making processes.

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The Members 1st team searched for a knowledgeable partner with expertise in Azure technologies and experience in architecting complex, modern data solutions. By collaborating with the right partner, Members 1st hoped to navigate the intricacies of cutting-edge data management and unlock the full potential of their data assets. Members 1st goals included gaining the ability to streamline their operations, optimize resource allocation, and ultimately deliver enhanced value to their Members through personalized experiences and data-driven insights.

SOLUTION

3Cloud's solution for Members 1st involved the development of a robust Enterprise Data Lake / Data Lakehouse architecture, branded as the M1360 platform. This framework served as the foundation for integrating disparate data sources and seamlessly blending them to cater to the diverse needs of all business units within the Credit Union. By consolidating enterprise-wide data into a centralized repository, the M1360 platform empowered Members 1st to advance their data management practices and streamline operations across customer service, branches and back-office functions.

Key to the success of the M1360 platform was its metadata-driven nature, which enabled dynamic coding and streamlined data loading processes. With the ability to easily ingest data from SQL Server, vendor data feeds, and disparate systems using metadata, Members 1st could rapidly adapt to evolving data requirements without cumbersome manual intervention. 3Cloud's expertise played a pivotal role in guiding Members 1st through the intricacies of implementing dynamic coding and metadata-driven processes, ensuring efficiency and agility in data management. 3Cloud used Databricks for the ETL code, Azure SQL DB for the control and logging framework, and Azure Data Factory for the orchestration.

3Cloud developed a true development (Dev) + Test environment that integrated with Production that leveraged Azure DevOps to support code deployments. 3Cloud's solution introduced Members 1st to their first instance of true cloud CI/CD app development, enabling clear and easy code reversions and tactical timing of code deployments.

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In addition, the nature of the M1360 platform supported seamless integration with a myriad of systems, including Power BI and Microsoft Fabric. This interoperability not only enhanced accessibility to curated data sets, but also facilitated the deployment of machine learning models. With Fabric now deployed on top of the M1360 platform, Members 1st benefits from enhanced ease of use, functionality and self-service capabilities, marking a significant milestone in their data modernization journey. Through collaborative efforts and the partnership in creating innovative solutions, 3Cloud and Members 1st transformed data management practices, enabling the organization to capitalize on the full potential of its data assets and drive meaningful business outcomes.

RESULTS

The collaboration between Members 1st and 3Cloud has yielded game-changing results in data management and operational efficiency. With the implementation of the M1360 platform and the adoption of self-service capabilities, the organization has experienced a significant reduction in administrative overhead and streamlined data access across business units. By centralizing enterprise-wide data and enabling business unit self-service reporting with Power BI, employees can now easily create and access the insights they need, freeing the data team from repetitive data loading tasks and empowering them to focus on value-added initiatives.

The transition to the new platform has not only enhanced data accessibility but also paved the way for more specialized Member experiences and accelerated decision-making processes. By consolidating data sources and implementing automated processes, Members 1st has achieved substantial time savings, freeing up time for Business Intelligence engineers to focus on creating improved enterprise-wide analytics and machine learning models. Additionally, the conversion of machine learning models to the new platform has resulted in significant cost savings and improved runtime efficiency, further driving operational excellence and computing resource optimization.

The Members 1st data lake refreshes *in response* to data being refreshed and available in their source systems, which means it's not a scheduled pull, but instead a reactive one for both scheduled and merged changes. 'Data freshness' is directly dependent on their source systems data availability. In several instances, M1360's speed in loading data has significantly compensated for delays in upstream



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and vendor system data processing, giving users access to the data faster, despite the delays. Member's data lake contains around 20+ TB and refreshes daily in typically under 2 hours, with data being available to users by 6 a.m. EST. Additionally, the metadata driven approach enabled an "update in only one place" solution for data transformation logic, ensuring that any changes in business logic can be done quickly.

The collaborative partnership between Members 1st and 3Cloud has fostered a culture of continuous learning and innovation within the organization. As analysts across business units are upskilled to leverage Power BI and explore data transformation capabilities, Members 1st is positioned to utilize the full potential of their data assets and drive superior Member service. 3Cloud and Members 1st engaged as a true partnership, with a shared commitment to excellence and a forward-thinking approach to technology adoption. With the help of 3Cloud, Members 1st is well-positioned to navigate future challenges and capitalize on emerging opportunities with improved data management and analytics.

"The partnership between Members 1st and 3Cloud has created one of the most technology forward thinking credit union data platforms available. The platform's ability to merge Credit Union wide data with incredible speed has enabled self-service reporting using Power BI across the entire organization with curated datasets and embedded data governance. Our business units quickly started automating and creating reporting in the new cloud environment. M1360 didn't just reduce data silos, it destroyed them."

- Anita McAllister, VP of Data & Analytics

MEMBERS 1ST CLIENT PROFILE

Financial institution serving over 500K Members
Employees: 1K+
Innovation Focus: Data & AI