



Healthcare leader streamlines testing with end-to-end test data management solution

Reimagining the existing UI and UX to develop an end-to-end suite for quicker data identification & synthetic data creation with no manual intervention



Bridging the gap in Prior Authorization product test data

A leading healthcare enterprise is dedicated to improving community health by offering a comprehensive range of managed healthcare products and services, with a primary focus on Medicaid, Medicare, and commercial products. Their commitment to a localized approach allows them to deliver accessible, high-quality, culturally sensitive healthcare coverage to diverse communities.

The availability of qualified health test data is of utmost importance, across legacy and modern systems, to enable robust, accurate and valuable products. While the client had successfully addressed certain aspects of test data related to claims, members, and providers, a significant gap existed in Prior Authorization related test data (synthetic & de-identified), which was both complex and lacked adequate solutions. This prohibited the organization from developing a product that met the users' needs because of their inability

to fully test the unique scenarios that came to light during the complex Prior Authorization process.

To address this challenge, the business sought to establish a standalone capability for their Healthcare Testing Center of Excellence (COE) team. The goal was to facilitate the seamless request and retrieval of Prior Authorization test data, ultimately benefiting both the product development team and business users in their testing efforts. Brillio's deep understanding of the client's operational landscape, system design, and data flow, coupled with the proven track record in developing similar solutions for claims, established Brillio as the preferred partner for this undertaking.

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A three-phased approach to creating the Test Data Management Solution

Brillio enabled the client in the development of a comprehensive Test Data Management (TDM) strategy for Claims Processing. Brillio's work done in the claims processing space allowed for robust documentation and execution of test data management processes across multiple interdependent systems, providing the team with invaluable insights on the intricacies and challenges inherent in the testing process.

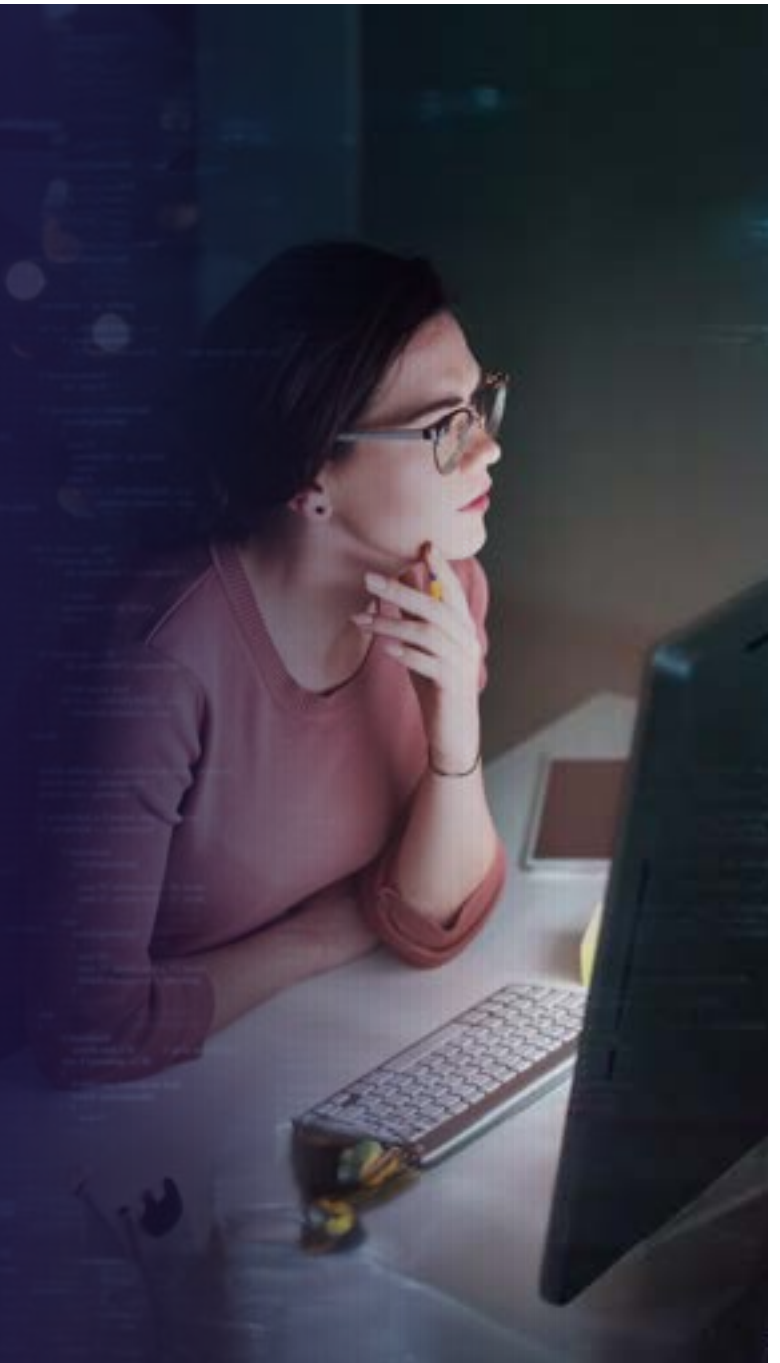
The solution approach was structured into three key phases:

Analysis and Definition

During this phase, Brillio meticulously analysed the test data requirements for the users across key parameters affecting data availability, governance, and security. This analysis helped in defining specific requirements for various business functions. To achieve this, Brillio harnessed the capabilities of Talend to develop a scalable solution.

Design and Discovery

In this stage, Brillio crafted a reference architecture aligned with the client's objectives and their long-term vision for Test Data Management (TDM). A thorough evaluation of technology solution options, encompassing market tools and ground-up development was conducted. Following a comprehensive comparison, Brillio advised on the most suitable technology choices on cloud and on-prem systems.



Implementation

With the finalized architecture in place, Brillio devised a 3-month implementation plan to guide the approach. The initial phase of solution development involved extensive focus on use cases which helped in synthetic data generation. Brillio studied multiple source systems identifying the relevant databases and schemas necessary for synthetic data generation. The creation of entity relationship diagrams, flow charts, and the source code itself were integral to this phase. Brillio also implemented comprehensive data validation using subsets and established rules for data generation and masking, particularly in sensitive columns where applicable. The MVP was successfully implemented, and key insights and findings were presented.

In parallel with these efforts, Brillio undertook a complete overhaul of the existing user interface and user experience (UI/UX) to create a modern, consistent user experience aligned with modern design principles.

Brillio also developed an end-to-end suite designed for the efficient creation of Prior Authorization test data, benefiting both business and product teams. This was developed in a short span of 10 weeks.

This suite allowed users to search for existing Prior Authorization test data in source systems within the test environment based on specific parameters such as State, Line of Business (LOB), Procedure Code, and start/end dates. In instances where Prior Authorization data is absent in the test environment, the TDM suite can generate synthetic test data for Prior Authorizations across various customer applications within the test environment, matching the identified parameters. Furthermore, submitted Prior Authorization requests can be conveniently tracked and monitored through dashboard services.

Within a remarkably short timeframe of just 10 weeks, Brillio developed a comprehensive suite for creating Prior Authorization test data, serving the needs of both business and product teams.

Elevating Test Data processes with rapid Prior Authorization Test Data Solution

Brillio completely re-envisioned the existing user interface and user experience (UI/UX), crafting a contemporary, cohesive design that adheres to modern design standards. This transformation brought forth several key benefits:

- Significantly increased speed while reducing manual intervention: Accelerated data identification and synthetic data generation.
- Automated test data requests: Automation facilitated timely responses to tactical requests, addressing the unique needs of individual users.
- Improved test design efficiency: By ensuring the availability of high-quality synthetic data during the test design phase, unnecessary delays in test execution were mitigated.
- Responsive test data repository: A regularly updated test data repository allowed for swift responses to requests with short turnaround times, providing relevant test data as needed.
- Configurable rule-based synthetic data creation: The UI-driven configuration for rule-based synthetic data generation facilitated rapid scalability to accommodate specific services, Lines of Business (LOB), and states.



ABOUT BRILLIO

Brillio is one of the fastest growing digital technology service providers and the partner of choice for many Fortune 1000 companies seeking to turn disruption into a competitive advantage through innovative digital adoption. We help clients harness the transformative potential of the four superpowers of technology: cloud computing, Internet of Things (IoT), artificial intelligence (AI) and mobility. Born digital in 2014, we apply our expertise in customer experience solutions, data analytics and AI, digital infrastructure and security, and platform and product engineering to help clients quickly innovate for growth, create digital products, build service platforms, and drive smarter, data-driven performance. With 17 locations across the U.S., the UK, Romania, Canada, Mexico, and India, our growing global workforce of nearly 6,000 Brillians blends the latest technology and design thinking with digital fluency to solve complex business problems and drive competitive differentiation for our clients. Brillio has been certified by Great Place to Work since 2021.



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