Case Study

Solution-Soft ®

Time Machine® helps CVS Health Dramatically Reduce the Time and Effort to Run Time Sensitive Testing for its Financial and Billing Processes

"It has been a game-changer to enhance our testing accuracy in all aspect and to minimize production downtime in ensuring our financial systems are always in compliance"

About Aetna/CVS

Aetna, a CVS Health company, is one of the leading providers of health insurance services in the United States, dedicated to improving healthcare outcomes for millions of individuals and families. Aetna offers a wide range of health insurance plans, including medical, pharmacy, dental and behavioral health services. With a commitment to innovation, Aetna strives to enhance the quality and affordability of healthcare services for its members while maintaining compliance with complex regulatory environments.

Project

Aetna faced the critical challenge of ensuring the accuracy and reliability of its financial and billing processes across multiple platforms. These processes involved time-sensitive testing of financial packages, billing systems, and member services, which required precise control over various time scenarios. Aetna needed a solution that would help test events like financial reconciliations, member billing cycles, and enrollment updates without disrupting live production environments.

A key requirement was the ability to simulate future billing dates, monitor member activities, and test event triggers such as disenrollment's and unpaid invoice handling. Given the complexity of their operations, Aetna sought a tool to automate time-based testing for processes like financial reporting, invoicing, and regulatory compliance checks.

Challenge

Aetna's financial and billing systems needed to be tested in various time-sensitive scenarios to ensure continuous compliance and accuracy. Some key challenges included:

- **Simulating Future Billing Cycles**: Aetna needed to ensure that future billing amounts would be correctly calculated and invoices properly sent to members at different times.
- **Testing Member Events**: Testing scenarios such as member disenrollment's, sending termination letters, and unpaid invoices had to be handled carefully without affecting live systems.
- **Coordinating Across Departments**: The financial, IT, and QA teams had to run synchronized tests across departments without disrupting production. Multiple time scenarios had to be tested in a controlled, repeatable environment.
- **System Clock Restrictions**: Changing system clocks manually was time-consuming and could cause errors, especially in environments subject to Active Directory policies that restrict clock changes on Windows servers.

About Solution-Soft

Solution-Soft is the leader in virtual clock, time shift testing software solutions for the ever-changing digital world. Our flagship and market proven product, Time Machine, opened up brand new possibilities in the application testing landscape upon its release in 1997. Today, thousands of applications have been tested with Time Machine, and IT professionals recognize that using a virtual clock is the ideal and safest way to conduct date and time testing. As pioneer in our field, we've created the Time Machine Product Suite and Time Machine for Container, a collection of cutting-edge testing software that augment Time Machine to further streamline enterprise cloud initiatives, containerization, micro services, and IT modernization for end-to-end integration testing, cloud migration, test automation, Agile/DevOPs, Continuous Operation, and Test Data Management.

We proudly provide our 2000+ domestic and international customers, including 47 of Fortune 100 companies, with our advanced solutions to optimize their testing and help deliver projects on-time. Solution-Soft's customers are across all market sectors including 3M, AMEX, AIG, Australia Tax Office, BBC, Boeing, British Gas, Covered California, Dept of Works & Pension, Deutsche Bank, Discover, FedEx, Federal Reserve Bank, Orange, National Australia Bank, SNCF, and Zurich Insurance. We bolster our market presence through robust partnerships with companies including Accenture, Capgemini, DXC, HPE, IBM, Infosys, Microsoft, Oracle, Red Hat, and RedMane.

Founded in 1993, Solution-Soft is privately held and based in Santa Clara, CA.

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Traditional testing methods often required stopping critical systems to adjust clocks, which resulted in significant delays and left room for human error.

The Time Machine Solution

To address these challenges, Aetna implemented Solution-Soft's Time Machine, a virtual clock software that allows teams to conduct precise time-based testing without impacting live operations. With Time Machine, Aetna was able to simulate different time periods seamlessly, improving the accuracy and efficiency of financial and billing tests.

Time Machine enabled Aetna to:

- **Test Billing and Invoicing with Time Travel**: Simulate billing dates across various regions, helping test future billing amounts and member communications with ease.
- **Replicate Member Events**: Perform time travel testing to replicate real-world events such as disenrollment's and sending termination letters to members, ensuring timely responses to changes in membership.
- **Streamline Batch Processing**: Automate batch processes in a controlled, time-shifted environment to validate financial reporting and ensure billing accuracy, even when testing multiple internal and third-party systems.
- **Minimize Downtime and Errors**: Time Machine's GUI made it easy for different departments to manage time travel independently, reducing downtime and minimizing the risk of errors during time-based testing scenarios.