

# Federal Government Agency Performs SOA Date and Time Simulation Testing across the z/OS Architecture

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## Background

The organization in this case study is a large US Federal agency, more than three quarters of a century old, supporting over 1,400 offices responsible for providing service to over 300 million clients nationwide. With such a large client portfolio, the agency had a need to ensure that its critical applications would always function correctly across all of their mainframe related platforms, across all 6 United States time zones.

## Challenges and Requirements

The agency's application development team needed a user-friendly solution for testing application functionality by simulating dates and times (DTS testing). This would enable them to ensure that applications with date-dependent logic (e.g. account statements, invoices, paychecks, etc.) would function correctly, improving application reliability and increasing user satisfaction. They needed to simulate every legitimate (e.g. no February 30th) past or future system date and time within the range of their SOA environment, which included their backend COBOL apps that ran and executed with batch, CICS and DB2 databases. They also needed integration with their many Java program-driven WebSphere Application Servers, as well as the ability to run under UNIX Systems Services (OMVS).

Due to a highly complex environment, there was a serious need for maximum granularity in activation of any job step via JCL. This required a DTS tool that could simulate dates and times at the individual job step without impacting other jobs or users (it would also help minimize system overhead). Any DTS tool employed would not be able to make permanent changes to the IBM system code and it would need to support z/OS 64 bit.

All of this functionality needed to be in a single tool to access the whole z/OS-based SOA environment where the incumbent tool could not. The solution would also need to co-exist with all IBM code and third-party products, including the incumbent DTS product.

## Solution

The agency installed SoftDate version 4.2 in mid-2011. After extensive testing, it was proven that SoftDate met all of the system-level requirements and was fully backward

compliant with the incumbent product as both could exist in the same LPAR(s). User adoption of features was very fast - users quickly learned how easy it was to switch from the existing DTS tool to SoftDate. They then moved onto the more modern SOA environment in testing the z/OS-based Java apps in cohesion with dozens of IBM WebSphere Application Servers and that integration with their back end COBOL, CICS and DB2 apps. Complete cohesion was accomplished, enabling them to provide higher quality service to their clients.

## Benefits

SoftDate's fully integrated features enabled this agency to fully DTS test all the SOA app suites that have Big Data on backend DB2 databases and front-end clients who self-serve via BYOD. The agency was also able to reduce the impact on the system by using the SoftDate "minimum impact" feature where there is essentially no impact on jobs that are not using SoftDate (the incumbent product had been intercepting every system date or time request, resulting in much higher overhead).

SoftDate functions as a virtual time machine across IBM's z/OS batch, CICS, IMS (including FastPath), DB2, WebSphere Application Server and TSO environments. SoftDate's Date and Time Simulation (DTS) is minimizing the potential for data errors that could explode with exponential growth out of the zSeries systems and into the dwellings and businesses of many citizens. SoftDate provides the most advanced SOA testing of date and time application logic with both future and past DTS with no need to change the system clocks.

SoftDate allowed the agency's Developers and Testers to thoroughly test the most advanced SOA application suites in the opening up of z/OS with WebSphere Application Servers and the integration and cooperation of Java apps with the backend CICS/DB2 Cobol apps, enabling them to providing better service for their large number of clients.

## About SoftBase

SoftBase is committed to creating a better DB2 development experience. By combining decades of DB2 expertise with a set of proven DB2 testing and performance-tuning tools and an unmatched customer support team, SoftBase delivers – helping application developers and DB2 administrators create reliable, high-quality DB2 applications faster and with ease. With SoftBase you can count on tools that work as promised, and a knowledgeable support team available 24/7 to answer questions.

That's SoftBase: Proven Technology. Proven Tools. Proven Partner.