

NYC Department of Health and Mental Hygiene Finds Cure With SOA

Overview

Description

- ✓ NYC Department of Health and Mental Hygiene SOA Foundation

Software

- ✓ IBM Information Server (WebSphere DataStage, WebSphere QualityStage)
- ✓ IBM WebSphere Process Server
- ✓ IBM WebSphere Enterprise Service Bus
- ✓ IBM WebSphere Message Broker
- ✓ IBM WebSphere TX
- ✓ IBM WebSphere Portal
- ✓ IBM Tivoli Identity Manager
- ✓ IBM Tivoli Access Manager

Benefits

- ✓ Scalability improves file handling by 2500%
- ✓ Reallocates resources to work on higher priority tasks
- ✓ Leverages architecture to integrate 311 project
- ✓ Enables access management and simplified on-boarding

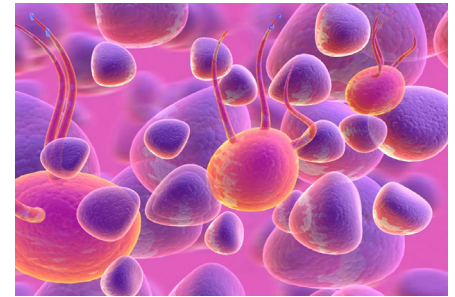
Proven Results

"Timely and accurate laboratory results are essential to the work of the Agency and to the protection of City's public health. Prolifics implemented a solution which will greatly enhance our ability to receive and manage infectious diseases reports from laboratories City wide. The team has exceeded all levels of professionalism and excellence I have come to expect from a firm on the cutting edge of technology like Prolifics."

— Hadi Makki, Assistant Commissioner
Chief Software Architect, Bureau of
Informatics & Information Technology

Client Background

New York City Department of Health and Mental Hygiene (NYC DOHMH) is the largest municipal government agency of its kind servicing over 8 million residents. The Bureau of Informatics & Information Technology, considered by their peers to be on the cutting edge of technology and an early adopter of the principals of SOA, is responsible for the collection and dissemination of vital data throughout business units within NYC DOHMH.



Business Problem

The New York City Department of Health and Mental Hygiene needed to improve and enhance their SOA architecture. The various programs within the NYC DOHMH have data and communication needs that are intense and diverse. Before being able to provide data to the various groups and programs within their organization for studies, analysis and action, the Bureau of Informatics and Information (BIIT) must accurately and securely receive and parse data from hundreds of sources including hospitals and laboratories. The Agency's objective during this engagement was to retire the legacy parsing engines in place and to accomplish the following:

- Adopt open standards and remove dependency on unsupported software; decrease difficulty in finding skilled resources for their legacy systems
- Create a more extensible platform which could instantly connect to variety of different data sources without requiring custom code
- Easily parse the many different file formats including several versions of HL7 data streams
- Increase performance and scalability while processing large amounts of data coming in through the agency; improving availability by reducing downtime and system failures.

Solution

Partnering with Prolifics, the Department looked to implement a new SOA architecture to link people, processes and information in real-time. Prolifics worked with the DOHMH team to create a robust and scalable architecture utilizing several of the WebSphere line of products — WebSphere Process Server providing process choreography, WebSphere Enterprise Service Bus providing connectivity with adapters for flat files and JDBC, WebSphere Message Broker for routing and provides native exception handling, and WebSphere Transformation Extender to manipulate HL7 streams and other data to database formats. Additionally the BIIT uses IBM's Information Server product, WebSphere QualityStage to cleanse their data — extracting patient, provider and facility information, verifying addresses, and deduplicating records.

Reliability of the data and how it's handled is key — especially with over 1,000 files containing up to a few hundred records each. Incoming files via "feeds" are received using a complex file format (HL7)

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- the standard for healthcare information. Because of the complexity to the standard, many of the healthcare providers did not comply fully or implemented their own interpretation of the standard. Handling these files became less daunting using Transformation Extender. Prolifics experts used Transformation Extender's built-in understanding of HL7 as a baseline and was able to easily make adjustments because of the elegantly categorized restrictions making debugging and modifying easy.

The SOA solution is better able to handle the Bureau's volume of data while providing a faster and more stable environment which has little to no "down time" boasting an improvement in file handling by 2500%.

This improvement increases productivity and frees up staff resources to work on more pressing issues like the analysis of data and the distribution to various programs they service.

With the implementation of the current feeds, they are able to reuse assets when creating and customizing additional feeds needed in the future.

In fact, the Bureau was already able to leverage the architecture with their 311 call center integration project – the first city agency to integrate with 311. In brief, a data feed is exchanged with the 311 call center for pest control issues. As the phone call is received and data is keyed in to the CRM system, Siebel, by the call center representative, the feed is instantly sent to the Department of Health where the Message Broker flow picks it up and saves it to a warehouse while also routing it to the appropriate program and application to dispatch an inspector. Using this model, the Bureau can leverage this process for future reporting and action steps such as restaurant complaints and other 311 logged incidents.

Prolifics handled the first phase of their SOA implementation quickly, efficiently and exceeded customer expectations by deploying in 2 ½ months. With the solid infrastructure in place, the Bureau is poised for their next phase of development with Prolifics which will bring in IBM Tivoli Security and Portal products to publish this information to its employees and to the citizens that it serves with the proper levels of access and simplified on-boarding.

Switching to IBM's family of products maintains a high level of quality while also availing the Bureau to find skilled staffing. They have lowered training costs because there's easier on-boarding with open standards. Additionally, Prolifics has delivered a robust SOA architecture which is easy to extend, can take on more feeds, and can grow with their future needs.

About Prolifics, a SemanticSpace Company

Prolifics is the largest systems integrator specializing in IBM technologies. Having garnered awards for its solutions and technical excellence across IBM's entire software portfolio, Prolifics provides expert services including architectural advisement, design, development and deployment of end-to-end SOA, Portal and Security solutions. SemanticSpace, Prolifics' parent company, is a global IT services firm providing application development, testing, application maintenance and outsourcing services. Bringing over 30 years of experience and a strong global presence across the US, Europe and Asia, the SemanticSpace companies offer clients end-to-end services combined with the market's most seasoned and skilled consultants and the dedicated care and attention that comes from a highly-specialized, boutique company. By combining application frameworks, prebuilt components, custom development expertise, a governance framework and a blended shore model, we help organizations decrease risk in complex software development and deployment investments, improve time to market and increase success of business strategy execution.



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