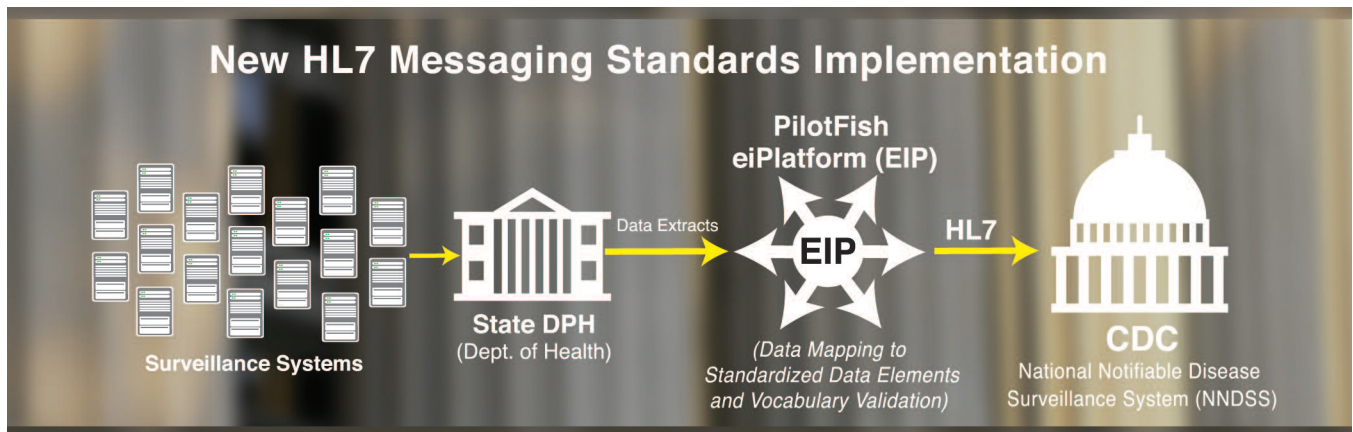


PilotFish Studies in Integration

Integration Engine Speeds Up Complex HL7 Implementation

Implementing a major migration to new extended HL7 standards for reportable data in over 100 categories could be overwhelming - not so for this organization. The first foundational category, implemented in a little less than a month, met onboarding benchmarks and cut smoothly over to production. Interfaces were created at unprecedented speed with PilotFish's interface engine's automated interface assembly line process. Leveraging PilotFish's flexibility and extensibility, the client was able to easily create custom processors to meet key challenges. In this case study, learn how the client was able to rapidly architect and implement this solution and why they expect the next phase to be accomplished even faster.



THE CLIENT

This Department of Health (DPH) collects extensive data from a multitude of surveillance systems wherein hundreds of hospitals, healthcare providers and laboratories send public health data to local and state public health departments. Data is normalized, validated and standardized to meet further reporting and exchange requirements. Data is regularly submitted to the Centers for Disease Control and Prevention (CDC) programs through numerous systems, a key responsibility which adds to the workload of the state and local public health staff.

The client juggles to keep up with the rapidly changing landscape of healthcare data and need for IT modernization. Pressure to meet ever increasing state and federal mandates adds to their challenges.

THE CHALLENGE

The CDC has launched initiatives to increase the robustness of the National Notifiable Diseases Surveillance System (NNDSS) technological infrastructure so that it is based on interoperable, standardized data and exchange mechanisms. To that end, the client must implement newly developed CDC HL7 message mapping guides (MMGs) for nationally notifiable data.



PilotFish Studies in Integration (continued)

The client is tasked with taking data from the state's multiple surveillance systems and feeding back the relevant reporting data to the CDC's NNDSS system in HL7 as per the new CDC guidelines, HL7 specifications, and milestones. The CDC has currently prioritized 9 MMGs for adoption— Arboviral, foodborne, Generic v2, hepatitis, STD, congenital syphilis, pertussis, mumps and varicella. This case refers to the Generic v2 deployment. A template from the CDC serves as the underlying structure to guide the implementation and integration. It provides mapping from local to standardized data elements and provides links to a bound value set for vocabulary validation.

The client turned to PilotFish for a modern, extensible and flexible interface engine solution that radically simplified data transformation and reporting. PilotFish had already been leveraged by the client in other successful on-time and on-budget initiatives. The speed and ease-of-use delivered by PilotFish were critical to the client's success for this current project.

THE SOLUTION

PilotFish offers an enterprise integration solution utilizing a complete Java framework that leverages application server technology, web services and industry XML standards for the rapid deployment of internal and external systems. In this case, by leveraging PilotFish, implementation of Generic v2 was completed in a little less than a month.

The PilotFish eiPlatform interface engine had debuted in the client's environment during the ELR (Electronic Laboratory Reporting) and Meaningful Use initial projects. There it had replaced a competing interface engine that benchmarked as slower and more costly. With PilotFish, the IT lead impressively architected, designed and implemented an ELR messaging bus in record time that integrates the PilotFish eiPlatform, BaseX and custom Java classes.

“ *I've been working on these multiple projects to collect data from our surveillance systems and feed them to the CDC in an HL7 format. I know a lot of this stuff is done by other states in Rhapsody and it's taken them months, and months, and months to do this. Utilizing PilotFish, I put this together probably in a month.* ”

Department of Public Health, Information Technology IT Analyst

In implementing the new CDC Generic v2 HL7 messaging standard in this staged project, the client leveraged:

PILOTFISH EXTENSIBILITY

Custom processors and listeners are easily created using PilotFish's Open API or .Net bridge. The client employed custom processors for rules-based decision making to filter and convert or reject specific data elements collected and also update LOINC and SNOMED codes.

PROCESS AUTOMATION

Leveraging PilotFish, processes that were done manually became automated - freeing up the client's resources and saving time. The surveillance team experienced immediate payback with automated data entry and automated monitoring of spreadsheets.



PilotFish Studies in Integration (continued)

PILOTFISH COMMON MODEL

No matter how complex, integrations are handled by the same methodology with PilotFish – each and every time. The ROI is measurable in time and resource savings for the next set of integrations for this project.

In PilotFish, interfaces are constructed from a common set of stages via a graphical automated interface assembly line (including Listeners, Processors, Transformations, Routers, and Transports). With drop-down menus, drag & drop mapping and pre-configured screens - building healthcare interfaces is easy and fast. (Availability of a built-in computationally complete palette of XSLT structures, functions and macros is another advantage.) PilotFish integrations are self-documenting, allowing for cost-efficient changes, updates and removing the dependency on who created an interface.

PilotFish includes more HL7 specific tools and functionality than any other product on the market with features such as a proprietary lenient parser capable of importing non-standards compliant data. Format readers facilitate instant import of a format for the source or target from a file or other data descriptor. PilotFish's software accommodates the specific version of HL7 that the CDC requires without any special handling and reading in the extended version of HL7 from the CDC took minutes.

PilotFish implementations typically take a few weeks, not months and months. Interfaces going forward can often be configured in less than 30 minutes. Subsequent implementations by the client for these new HL7 MMGs for NNDSS reporting will be based on the foundation built with the Generic v2 integration.

THE BENEFITS

The Generic v2 HL7 implementation took a little less than a month. It's been onboarded and smoothly cut over to production. PilotFish's integration solution's simplicity and sophisticated architecture were critical to the success and speed of this implementation. The client confidently projects that each additional phase of this large-scale project will go even faster as they were able to easily extend PilotFish with custom processors that will automate further rollouts.

With PilotFish, there is no additional cost to access components or features. PilotFish offers a complete solution of integrated components that encompass the full life cycle of integration. With PilotFish's integration solution in place, the client expects that up to 90% of the work involved for each new HL7 MMG can be done by non-developer professionals. Updates and maintenance ahead are projected to incur minimal internal resource cost and disruption.

The speed at which the first implementation was completed leveraging PilotFish has been noted. Attendant benefits of ancillary process innovations and improvements look to accrue to other integrations and data exchange going forward.



PilotFish Studies in Integration (continued)

THE FUTURE STATE

The next phase being implemented by the client contains a 10x's larger data set. PilotFish deals with diverse connectivity, validation, data transformation, routing and delivery of information and easily scales to handle tremendous volumes of data. PilotFish's built-in components, extensive tools as well as its scalability, flexibility and extensibility make it a future-proof integration solution.

PilotFish adheres to the architectural principles that our integration solution should be easily extended using open source components and be infinitely flexible so that any integration, no matter how complex, can be handled with the same methodology and tools - each and every time.

The PilotFish eiDashboard component has been established by the client for operational reporting and transaction monitoring. It's a great component for troubleshooting and management reporting. The client also employs the PilotFish eiTestBed for automated onboarding capabilities.

The CDC, in its initiatives, is committed to getting and sharing better data, faster. PilotFish delivers the integration solution to simplify and streamline processes, automate repeatable tasks, expedite results and build the foundations for trustworthy data-driven decision-making.

Over the course of nearly 20 years and hundreds of implementations, PilotFish has developed and refined a methodology for the configuration, testing and deployment of interfaces and process orchestrations. We have an unblemished track record of success. Through years of Bake-Offs and Proof of Concepts (POCs), we have demonstrated the value of our integration engine solutions to future customers. Let us conduct a Free Use Case Evaluation for you to determine where PilotFish can provide the most value to your organization and solve your most complex integration challenges.

To schedule a Free Use Case Evaluation and to learn about what PilotFish Solutions can do for your organization, please contact us at 860 632-9900 x 309 or Email us at info@pilotfishtechnology.com

