

Caché Success Story: IBM

Rapid Development

Java

High Performance



IBM Division Dramatically Reduces Development Time With Caché's Mapless Java Persistence

To say that IBM is a large, successful company is something of an understatement. They have many products and customers around the globe. One of the divisions in IBM is working on a global optimization project called FocalPoint. They have been able to dramatically reduce their development time by taking advantage of the new POJO (Plain Old Java Objects) support within Caché.

“Focal Point is being developed in Java and XML-based technologies,” explains Iran Hutchinson, a Software Systems Architect at IBM, and leader of FocalPoint. “In order to enhance our operations we have defined a set of ‘domain objects’, some known, and some new, that will be common. These Java objects will be persisted, and all our data will be held in one central repository. Then, using business rules and work flow in a service-oriented architecture, we will design an application that pulls and stores data from the central repository and presents it in a common interface globally.”

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With the goal in mind to support standards and to achieve some degree of future-proofing, Hutchinson chose to do a solution-oriented approach by determining:

- Requirements and Use Cases for the business problem
- Is there an IBM solution
- Is there an Open Source solution with an appropriate license
- Is there an IBM Business Partner/Commercial solution
- Should custom development be done

Hutchinson chose the post-relational Caché database for the central data repository because he could persist Java objects in Caché without mapping them to relational data structures. “In any given project,” Hutchinson says, “mapping Java objects so that they fit into a relational database may represent 60 percent or more of the development effort. A multi-faceted post-relational database was definitely the way to go.”

After evaluating several object databases, Hutchinson chose Caché based on its high performance and ease of use. Of particular interest was Caché’s POJO support. This unique feature (called “Jalapeño”) allows Caché to automatically create persistent Caché object classes from Java object definitions. Moreover, developers can continue to use their POJOs just as they always have – the persistence methods generated by Caché are handled by a separate component called the object manager. “Developers don’t even have to think about the database,” says Hutchinson.

Hutchinson himself did much of the early development on the FocalPoint project. He recalls, “In the first phase of the project, it took about one to two weeks to develop the object model after months of analyzing requirements and use cases. And it took only 15 minutes to persist the objects in Caché. If I had tried mapping those objects to a relational database, it would have taken months, given the size of the model.”

Plans call for FocalPoint to be tested and rolled out worldwide within IBM’s hardware support division. The initial implementation will consolidate 6-10 TB of data, and support approximately 10,000 users, with future plans for expansion. “FocalPoint will optimize our clients’ support experience,” says Hutchinson, “further reducing support cost for IBM and its clients.”

Having all the client support information in Caché will make it much easier for IBM to analyze that data, generate reports, and make decisions about their support operations. Says Hutchinson, “Caché is unique in that it enables SQL querying of object-oriented data without mapping, so it’s very fast. I could not get the same performance from a relational database, and I know that Caché saved me months of development time. For its technology, speed, and ease of use, Caché is the only choice that made sense.”

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