

# EnterpriseFlow chooses IBM DB2 9 with pureXML™ for BPM/ERP application suite



## *Facts*

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**Industry:** Software

**Products:** IBM DB2 9

## *Executive Summary*

EnterpriseFlow relies on DB2 pureXML™ technology to provide a flexible, highly adaptable database management environment for its EnterpriseFlow Application Suite, a Business Process Management (BPM) for Enterprise Resource Planning (ERP) product. DB2 9's sophisticated support for XML enables EnterpriseFlow Application Suite to efficiently store, manage, and query its business process objects (BPOs) that are modeled as XML documents. Using DB2 pureXML enabled EnterpriseFlow to drastically simplify its database schema and data access logic.

## *Introduction*

Started in late 2006 and primarily based in India, EnterpriseFlow provides business solutions for the Small & Medium Businesses (SMB) sector and focuses on developing solutions for the ERP product industry.

Its EnterpriseFlow Application Suite is a Business Process Management System (BPMS) and a Workflow Management System (WFMS) where each application module is modeled as a business process with new state assigned when it flows between role players such as Customer, Cashier, Employee or Manager until it is completed or archived.

EnterpriseFlow supports full cycle of business process development ranging from the design to completion and management of applications through its Integrated Design Environment (IDE) and Object Management System (OMS).

This product is first installed at Cosmopolitan Club, a prestigious social club in Bangalore, India, to improve its efficiency of monthly bulk membership billings based on different services selected.

## *Challenge*

One of the considerations in offering a product to SMB sector is affordability. With this in mind, EnterpriseFlow was initially developed with Tomcat and Derby as the Web application server and RDBMS, respectively. However, customers became concerned about support issues associated with these open source offerings.

EnterpriseFlow needs to support a diverse range of ERP-specific applications required by general business organizations. Each of these modules has different business object templates and it is difficult to store, link, manage, and access these objects by different modules.

Furthermore, easy customizability and extensibility, especially in terms of being able to develop custom business processes unique to each organization, become crucial requirements of ERP software solution. And as business processes are continuously evolving, a BPM System must therefore have the necessary flexibility to rapidly adapt to these changes.

## *Solution*

With IBM's offerings of license-free WASCE (Websphere Application Server Community Edition), DB2 Express-C, and low price global support subscriptions, EnterpriseFlow considered porting its application suite from Tomcat/Derby to WASCE/DB2 Express-C. Although the software had to be substantially rewritten to take full advantage of XML support in DB2 9, EnterpriseFlow developers decided to migrate due to the substantial advantages they expected to derive from DB2 pureXML. These included significant gains in performance, ease of developing future product enhancements, and improved flexibility and agility in adapting to business process changes for the application.

Initially, EnterpriseFlow application shredded and stored its XML-based BPOs in approximately 200 tables in a Derby database. Maintaining this database schema and querying BPOs shredded across these schemas was difficult. It was also difficult and time consuming to modify these tables when the BPO model was changed as it would require code change as well. After porting to DB2 9, the number of tables has shrunk by more than two-thirds (to approximately 60 tables). The native XML support in DB2 9 enabled the BPO XML representations to be stored directly in the database and avoided the complexity, inflexibility and cumbersomeness of shredding.

In EnterpriseFlow Application Suite, business process objects are modeled as XML files and these BPOs are associated with different Entities in various ERP applications. With DB2 9's capability of supporting multiple XML schemas in an XML type column, different XML representations of BPOs from different ERP applications can be stored in the same column in a DB2 table regardless of the associated attributes for each BPO.

Also, with this support, users can easily develop custom business processes unique to their organizations or develop extension to the EnterpriseFlow's BPOs.

“We have seen at least ten times in performance improvement after migrating to DB2 9. pureXML technology is truly a landmark development by IBM,” said Dr. Prabhakar, Managing Director of EnterpriseFlow.

### ***Benefits of DB2 pureXML***

- Ability to represent complex BPOs as XML documents and to store, manage, and query them effectively
- Reduced cost and labor for implementing ERP applications as it requires no code change for customization and extension to BPOs
- Offering low price ERP applications with DB2 Express-C License and Subscription option

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