

Application Migration for Leading IT Manufacturing Company

CASE STUDY

DATA CENTER SOLUTIONS

The Client

The customer is the worldwide leader in networking for the Internet. Their Internet Protocol-based (IP) networking solutions are the foundation of the Internet and most corporate, education, and government networks around the world. They provide the broadest line of solutions for transporting data, voice and video within buildings, across campuses and around the world.

The Challenge

The Accrual & Reserve Tool (ART) automates the entry and viewing of Accrual and Reserve Analysis numbers for the client's Asia-Pacific offices. ART is developed using NEWT, which is then converted to PERL. The client is moving towards implementing a standard framework based on MVC architecture. ART needed to be migrated from PERL to Java, as it would be easier to maintain, enhance and easier to integrate with other applications built around the Java platform.

The Solution

The Migration was carried out in following phases:

- Step 1: Reverse Engineering- of PERL Application to UML Class Diagrams. The PERL module (.pm) files containing subroutines are created from PERL (.pl) file. The .pm was reverse engineered to get the UML Class Diagrams. The generated class diagrams contain the method signature along with the relationships.
- Step 2: Manual Design Changes - Changes were made in the Class Diagram to incorporate any new/missing functionality. This allows creating a sound foundation for further development. The other activities carried out at this stage include modeling of state chart diagram, boundary diagram, collaboration diagram etc.
- Step 3: Depicting System Functionality - Solution Blue Print(SBP) Framework allows writing of business logic in a platform independent manner. This provides the flexibility of generating applications catering to any deployment environment viz. J2EE, COM+, .NET etc.
- Step 4: Application Generation - For migration of the ART application, the Solution Blue Print(SBP) Framework generates Java classes for business processing and database interactions. The front-end JSP pages were manually coded to adhere to the existing UI.

The Benefits

- Ease of enforcing Coding Standards
- Deliverables as per APAC SDLC
- Faster development & therefore lower Total Cost of Ownership (TCO)

- Automated forward engineering from UML to Java faster than conventional development process
- Model based enhancements and maintenance - Ease in Maintenance of application since business logic resides in UML
- Ease in future enhancements – change the UML & then automated code generation
- Models can be targeted across diverse platforms
- Documentation control
- Ease in Scalability
- Re-usability - various processes written & put in Foundation library - to be reused in different application in future for APAC theater
- Readily Deployable Platform Specific Application from Platform Antagonistic Model

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