



Subscriber Management and Revenue Tracking application (SMART) Migration - Case Study

Case Study: MIDAS for HBO

System Overview:

SMART application was developed using Sun Microsystems' Unified Development Server (UDS) 5.2.19 (aka Forté). HBO has made a decision to migrate this application to Java 2 Enterprise Edition (J2EE) technology. SoftSol performed the migration using F2J automated translation tool.

The Subscriber Management and Revenue Tracking application (**SMART**) is a critical application utilized by HBO's Cash and Revenue Operations department ("CRO"). It is used by CRO for tracking subscribers and revenue/billing for the HBO services.

Java version **MIDAS** (Management of Invoices, Deals and Subscribers) replaced the SMART application. This application is multi tier application built on Java Swing for front end and Spring as remote communication with ADS authentication.

MIDAS is built on scalable platform on Linux and Weblogic 9.x server. Client Invocation is provided using Java WebStart. MIDAS has so many special features like Object Locking, Session Management and JMS for business event handling.

Solution:

The system needs to be migrated to J2EE while keeping Oracle RDBMS intact. This application was targeted to be migrated to the J2EE technologies with the following tools:

- Java/Swing
- Spring Remoting
- Weblogic 9
- Oracle 9i RDBMS

Migration Methodology:

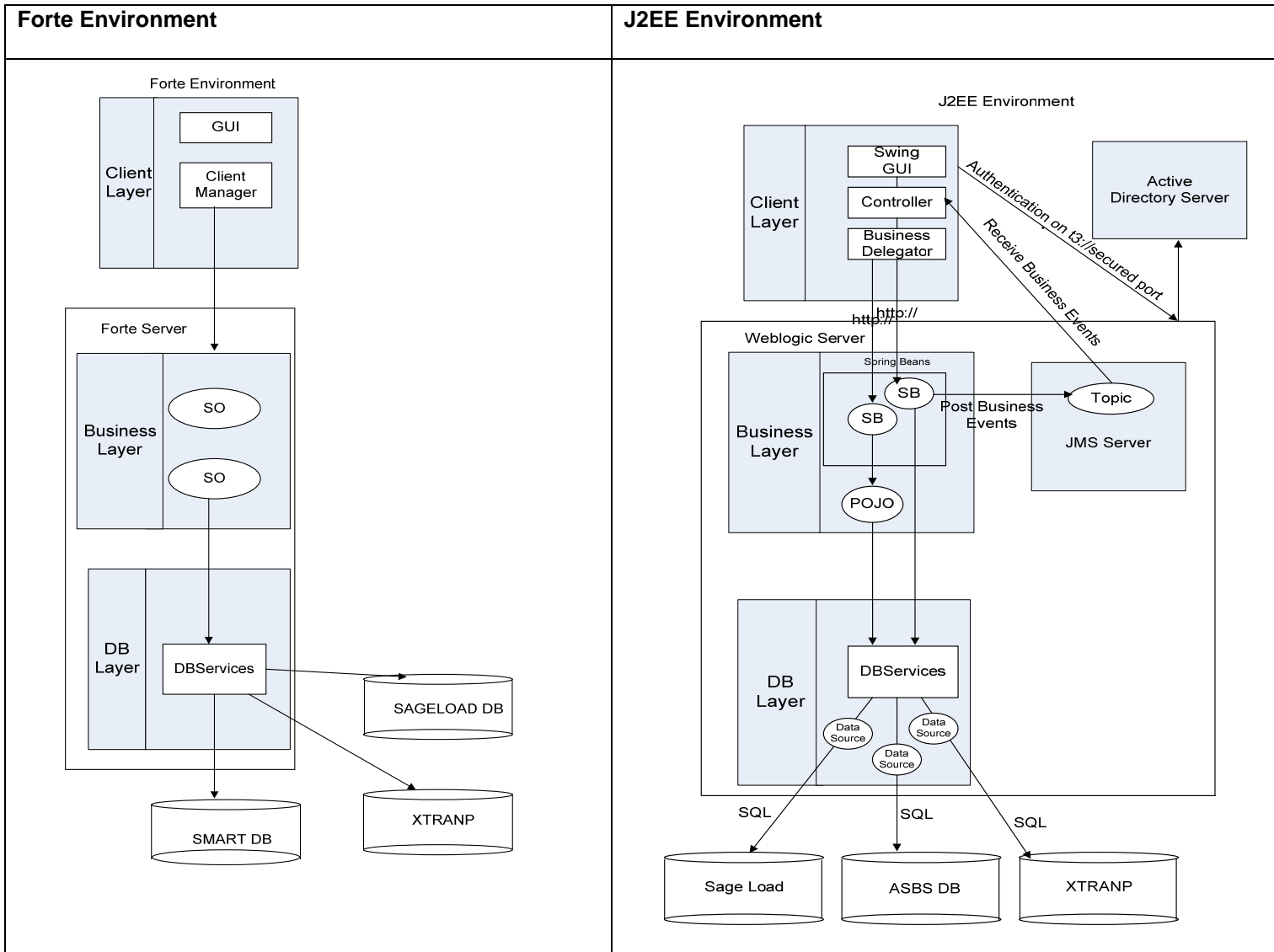
Soft Sol's migration methodology for MIDAS application migration comprised of following steps:

- Analyze and understand existing system, Knowledge Transfer through HBO of system use cases and obtain test cases.
- Prepare concise Functional Specifications, Architecture Assessment.
- Automatic source code migration of business logic, data access logic and GUI processing logic of existing Forte application into Java/J2EE, using **SoftSol's Forte to Java Migration Suite**.
- Auto-Migration of Forte GUI to Java Swings.
- Refactor converted code to different layers as shown in the diagram in the next section. The layers include Presentation, Business logic code as a service oriented architecture, and data access layers.



- Architecture patterns and design patterns, were applied consistently throughout the application.
- The existing Oracle database storage was leveraged during migration.
- We were able to get the migrated system up and running in a 1.5 Years.

MIDAS Architecture Layered Diagram:



The Modernized Layered Architecture:



- **Presentation Layer** – The Forte GUI has been migrated to Java/Swings. The process logic and event handling has been handled through thick client.
- **Database Layer** – The migration approach does not call for making any changes to the database schema.
- **Service Layer** – The service layer implemented through Http Spring Remoting framework and JMS Message for messaging between client and server.
- **Cross Cutting Concerns:** Logging, Maven Builds and Security.

Deliverables:

Serial No	Deliverables
1	Test Results for all the supplied cases
2	Functional Analysis Document
3	Design and Architecture Document
4	Java/J2EE Migrated System Source Code
5	Instrumentation and other Interface Migrated Source Code
6	Build and Release Document
7	Deployment Guide

Solution Advantages:

1. Ease of use
2. Ease of deployment
3. Performance Optimization
4. Integration with Batch Jobs