

Migrating J2EE Applications to latest Websphere version using Dedicated Technology Work Bench

Problem Statement

One of the key objectives for web application/technology teams in the year 2008 is to upgrade/migrate their current IBM Websphere deployments to the newer releases of the software. The latest version allows customers can take advantage of advancements and new features, which match the growing business and technical needs.

Though from a J2EE application perspective this is purely a technical upgrade, there are significant challenges that are inherent to the process. Not including external complexities of scale (large number of applications that need to be migrated in a fixed time frame), limited budgets etc. Most of these applications have a very short downtime window and are critical for business operations. A large number of them are client or external stakeholder facing applications hence any non-availability can cause significant losses and damage to the organization.

From a technical point, an important aspect to focus while migrating to a newer version of WebSphere, is "J2EE compliance". Analysis of this is based on the versions of J2EE in the current and targeted environments and a comparison of the different API versions. In addition, there is a need to analyze the application to determine which code violates or loosely interprets the J2EE standards.

Summary of Challenges:

- Technical upgrade of applications to newer version of Websphere
- J2EE Compliance Considerations
- Need for large team for short period of time for the migration
- Magnitude of applications that need to be migrated in a limited time frame
- Infrastructure and Application support time frames

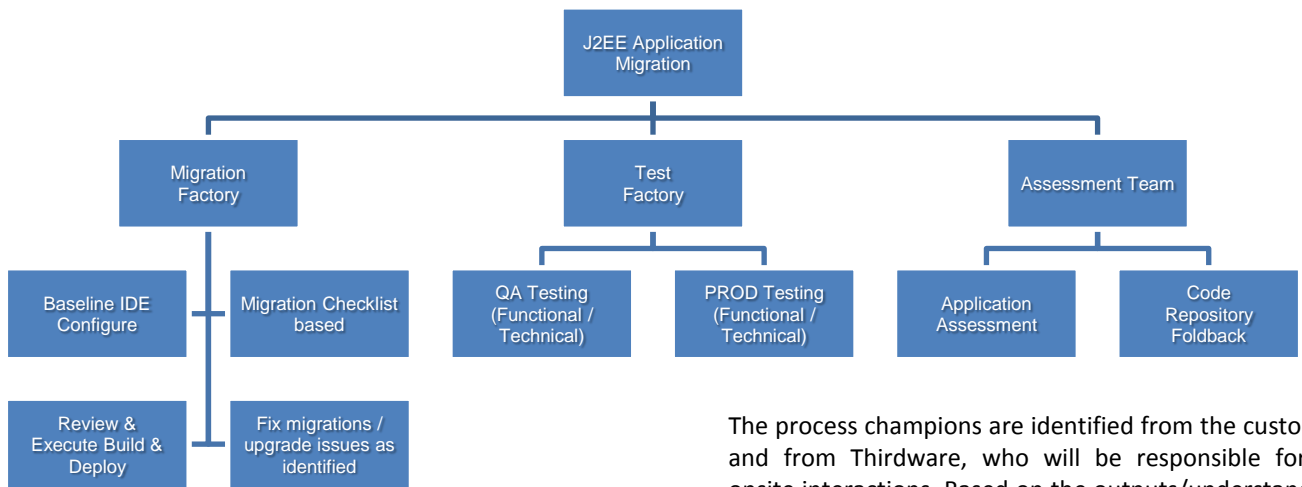
Solution Approach

Thirdware J2EE Center of Excellence (CoE) has envisioned an approach for these Application migrations/upgrades based on its vast experience. The approach makes the whole process of upgrade/migration to be checklist/procedure/questionnaire driven and leveraging the "Offshore Work Bench Methodology". And on a need basis leveraging technical architecture or solutioning capabilities available within the CoE

In this Upgrade/Migration Work Bench approach, the CoE has built a comprehensive list checklists / questionnaire's & documents for each step of the migration process. These predefined artifacts or project aids have been designed to reduce the complexity and ambiguity inherent to the process. The checklists also cover in-depth the various API's that have changed in the version of J2EE covering a large portion of work in correcting these aspects.

Additionally, the approach leverages the concept of a offshore Technology Work Bench, based on the premise that all repeatable tasks which require no external inputs can be structured and delivered in the required form. This approach helps increase the efficiency in the operations, while at the same time being scalable for the customer, allowing multiple applications to be worked on at the same time.

This solution approach leverages two pre-built Test and the Migration Work Benches. The processes in these Work Benches are predefined and depending on the objective, the required templates and work products are selected.



The diagrams give overview of the Upgrade/Migration Work Bench.

Initially a “Client environment and application portfolio analysis” team is set up which does a complete review & documentation of the same. This team also familiarizes the IT department on the execution model and the inputs/ outputs that are required & delivered during the process.

The process champions are identified from the customer and from Thirdware, who will be responsible for all onsite interactions. Based on the outputs/understanding of the assessment team the Work Bench processes are aligned to the specific needs of the customer. These teams are supported by the J2EE CoE with access to knowledge pool and architects to on key / unique aspects of the engagement. Finally the migration takes into consideration education of the customer IT Department by providing training and mentoring the customer development/support team for ongoing maintenance.

Activity	Owner
Code Foldback	Assessment Team
Foldback Test Cases	Assessment Team
Configure Application- baseline IDE	Migration Work Bench
Test application- baseline IDE	Test Work Bench
Redeploy application- new version IDE	Migration Work Bench
Review code- Pre-defined checklists	Migration Work Bench
Fix migrations/upgrade issues	Migration Work Bench
Document the Changes	Migration Work Bench
Review Build and Deploy Process	Migration Work Bench
Fix any migration issues required	Migration Work Bench
Build & Deploy inQA Environment	Migration Work Bench
Test	Test Work Bench
Deploy in PROD Environment	Migration Work Bench

Benefits:

- Process Driven
- Comprehensive & Scalable
- Checklist / procedure/ Questionnaire prebuilt
- Cost Efficient
- No disruption to application
- Limited load on IT Department

Recently for a customer, Thirdware migrated an application suite with 15 individual applications using this model with an estimated saving of around 70 %.

Solution Summary:

- Offshore Factory Model approach - Cost Effective
- Set up in the form of repeatable pre defined steps executed efficiently
- Comprehensive Checklists for each step/phase
- On Demand, Scalable
- Team with significant previous experience



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Thirdware Technology Practice

Fast Facts

- » Dedicated Center of Excellence
- » Strong Industry Exposure
- » Application Development, Integration and Support

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