A PREDICTABLE APPROACH TO ORMB (ORACLE REVENUE AND BILLING MANAGEMENT) TECHNICAL UPGRADE

Abstract

It is imperative for organizations to ensure that their software products are upgraded to the latest version for smooth business operations. In the case of Oracle Revenue Management and Billing (ORMB), managing technical upgrades is critical to prevent incompatibility issues, improve the user experience, and tap into the latest technologies. However, many organizations stall these upgrades for various reasons. This paper discusses the benefits of timely technical upgrades for ORMB. It also lists out the capabilities of three Infosys tools that help organizations de-risk their ORMB technical upgrade journeys.

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Introduction

Technical upgrades for Oracle Revenue Management and Billing (ORMB) are no longer optional for organizations. These are now mandatory to keep pace with changing technologies and avoid issues such as OS changes, browser incompatibility issues, sub-optimal processing, and deteriorating user interface (UI) performance. Technical upgrades should be taken up as a standard maintenance activity and executed in predictable ways to enhance the user experience.

ORMB gives organizations the opportunity to migrate to the latest platforms, leverage the latest frameworks and patch sets, and remain compatible to new server, OS, and browser versions. When the technology is continuously upgraded, it remains relevant and ensures that system support and maintenance is predictable.

Oracle Revenue Management and Billing (ORMB) upgrades are performed by experienced teams using a standards-based methodology. These teams know the inner workings of the platform and understand client processes, thereby de-risking the upgrade process. Some of the key steps during an ORMB technical upgrade are:

- Custom object analysis, where a standards-based object repository is used to analyze object impact and monitor the changes during upgrade

- Performance tuning and checks, where an expert team analyzes the code to be tuned in order to suit business needs and improve performance

- Factory approach to retrofit code, execute object changes, and ensure continuous deployment of components to the test bed for repeated testing

The systematic approach of upgrading ORMB to higher product versions can significantly increase efficiency and optimize resource utilization for organizations.

Demonstrating Success from ORMB Upgrade: An Infosys Case Study

1. What Infosys did

One of the largest organizations in the money transfer industry decided to upgrade their ORMB product after an extended period of time. They wanted to assess the stability of the upgraded product, the requisite technology changes, and the availability of a direct upgrade.

Infosys helped the client articulate the scope of the project, which involved modifying algorithms, adding new batches, and executing changes to data models, frameworks, layouts, CSS, SDKs, JDKs, and more. Apart from recommending standard actions such as system prerequisites, clean-up, and upkeep, Infosys also followed some best-practices such as:

- Selecting the right ORMB version based on the compatibility matrix

- Optimizing the production data based on a thorough understanding of the client's data model

- Evaluating the customizations, identifying the impact, and retrofitting code during the upgrade

- Benchmarking, monitoring, and resolving performance issues in multiple programs

- Reviewing how the upgrade would impact integration

- Optimizing the indexes and updating these to support business SLAs

- Ensuring timely resolution of any Oracle service requests raised during the entire upgrade project

2. Business benefits

Upgrading to the latest version of ORMB help the organization benefit from:

- Reduced customizations

- Ease of adopting new features

- Faster time-to-market with the latest technologies

- Enhanced end-user experience

- Improved system performance

A Tooling Approach to ORMB Upgrades

Infosys has developed a suite of tools that helps organizations de-risk and accelerate their upgrade journey to the latest ORMB versions. It ensures that organizations continue to reap high return on their Oracle investments while continuously enhancing user productivity and efficiency as well as enabling faster time to market for business objectives. These tools include development tools, deployment tools, and test automation tools.

1. Development tools – ORMB Upgrade Impact Assessment Tool

Capabilities

- Source code scan – Scans the custom Java source code and DB objects to identify the base artifacts referenced

- Impact analysis – Analyzes the upgrade changes and identifies these as 'impact' only when the changes have a high probability of altering the custom code

- Report generation – Generates a report in Excel, depicting the impact on the custom components
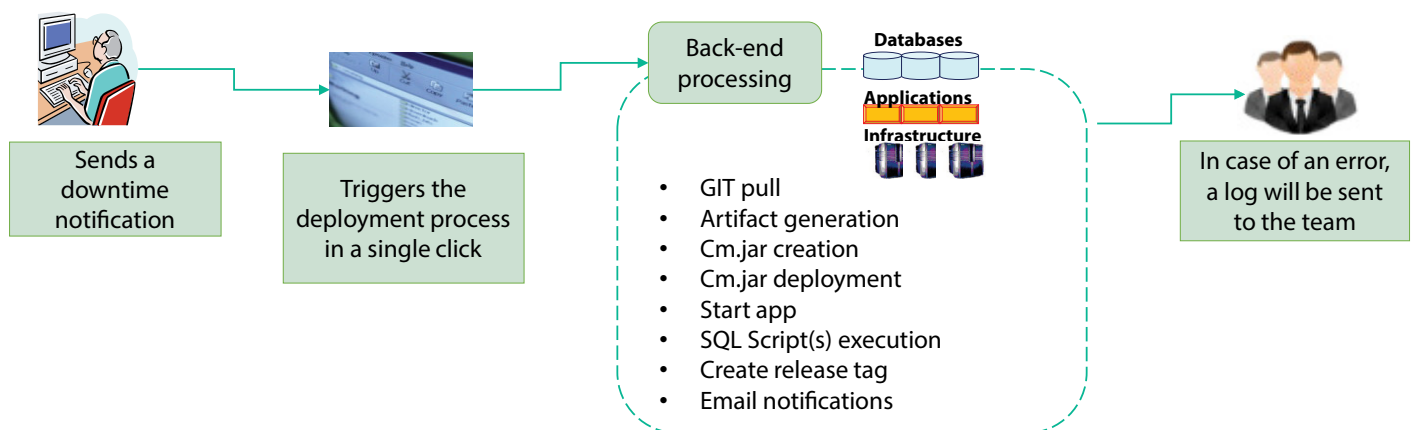
Key advantages

- The tool helps users understand the impact of the upgrade on custom components and the reasons for such impact even before installing the target ORMB version

- It can be used as an estimation tool to assess the effort needed for an upgrade project

- It can accurately calculate up to 60-70% of the total upgrade impact as well as the expected changes between any two ORMB versions

- It can be implemented quickly to deliver results within 10 to 15 minutes

2. Deployment automation tool

Capabilities

- Integrates with the GIT repository to pull the source code from a specific branch in the repository

- Can execute ORMB-specific build commands like 'artifact generation' and 'creation of cm.jar'

- Can deploy cm.jar on the Unix server

- Issues email notifications to the teams when the deployment is completed or in case of any errors

- Allows thread pool restart with a single click

- Executes SQL scripts on the database using a control file

Sends a downtime notification

Triggers the deployment process in a single click

Back-end processing

Databases
Applications
Infrastructure

- GIT pull
- Artifact generation
- Cm.jar creation
- Cm.jar deployment
- Start app
- SQL Script(s) execution
- Create release tag
- Email notifications

In case of an error, a log will be sent to the team
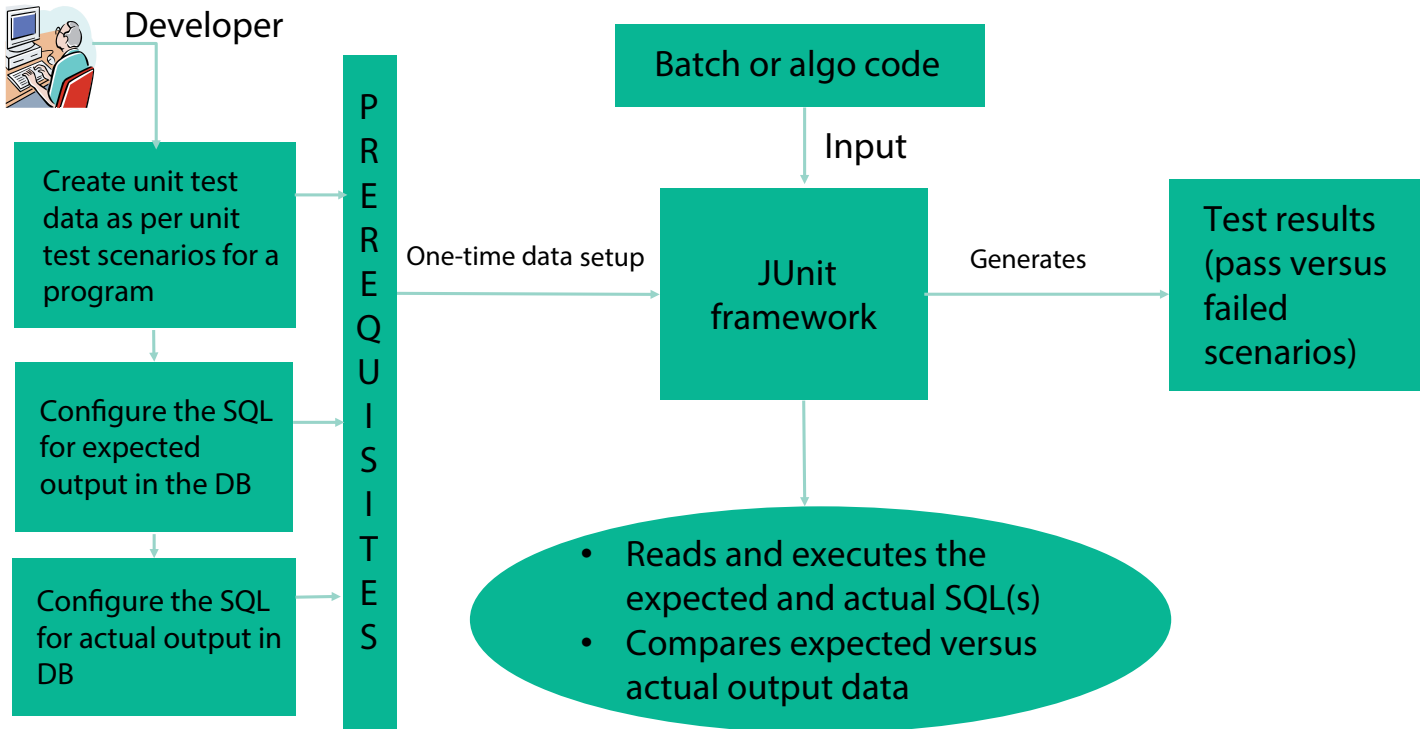
3. Test automation tool

Capabilities

- Leverages an automated unit testing procedure to ensure quality code

- Acts as a single and generic JUnit program that uses the batch/Algo code

as input and triggers the unit test scenarios configured

- Compares the expected versus actual output data and generates the test results

- Can be integrated with Eclipse IDE

- Part of a continuous build process through Jenkins

- Helps users identify bugs in earlier stages

ORMB – Unit Test Automation using JUnit

Developer

Create unit test data as per unit test scenarios for a program

Configure the SQL for expected output in the DB

Configure the SQL for actual output in DB

P R E R E Q U I S I T E S

Batch or algo code

Input

One-time data setup

JUnit framework

Generates

Test results (pass versus failed scenarios)

- Reads and executes the expected and actual SQL(s)
- Compares expected versus actual output data

The Infosys approach simplifies the journey to technical upgrades for Oracle Revenue Management and Billing (ORMB). Executed by an experienced team using repeatable methodology, it leverages a deep understanding of Oracle's products to de-risk changes and ensure smooth business operations. The approach includes application administration as well as database and performance specialists, making the entire upgrade process seamless. Further, the cutover process is rehearsed multiple times to ensure minimal downtime while maintaining data integrity and business-as-usual operations.

Conclusion

Managing the timely upgrade of ORMB to higher versions is crucial for organizations that want to keep pace with new technologies and secure their processes. Many hesitate from executing such upgrades due to concerns over stability of the new version, potential risks to the existing environment, and the lack of visibility into impending changes. Infosys has designed several tools for development, deployment, and test automation that assist organizations in assessing the true impact of upgrades, making it easier for them to make the right decisions, on time. These tools support integrations, reduce the need for customization, accelerate time to market, and enhance the end-user experience.

About the Authors

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Deept is a functional and technical expert in Oracle Revenue Management and Billing with over 16 years of experience. He is proficient in system requirements analysis, fit-gap analysis, and the design, development, configuration, integration, implementation, testing, and production of pricing and billing payments solutions for payment cards and financial service providers.

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Sujal has over 18 years of experience in the design and development of Java/J2EE-based applications, Oracle Revenue Management and Billing (ORMB), and Oracle Customer Care and Billing (CCB). Her focus lies in verticals such as utilities, banking, payments, and the money transfer industry. Her expertise includes solution design, integration, fit-gap analysis, automation, and the delivery of complex transformation programs.

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