

INFORMATION EMPOWERS

Modernize IT Infrastructure: Oracle Mainframe Rehosting



Oracle provides a foundation for re-hosting mainframe applications and data intact to lower-cost platforms, without losing business value or sacrificing Quality of Service. The result: reduced mainframe operational costs, MIPS containment, and accelerated SOA enablement.

"This [Oracle] target architecture is CNAM's first concrete step in component-based development. Functions are now reusable. Development and Maintenance workload is reduced. Improved responsiveness and IT performance resulted in faster implementation of new features."

– Maryvonne Cronier, CIO,
CNAM-TS

"The goal of the migration was to equal or exceed the performance of the existing environment and remove its risks. Not only did we achieve this, but we now are on open standards and have experienced tremendous costs savings!"

– Vincent Behague, IT Manager,
La Mondiale

Rapid changes in today's global business environment drive organizations to reduce total cost of ownership of their IT infrastructure, improve their ability to react to changing business demands, and minimize reliance on legacy skill sets—all while meeting new compliance demands.

As companies face increasing pressure to deliver more business value from their IT spending and free up funding for new business initiatives, reducing mainframe costs and modernizing legacy applications have become top-of-mind concerns for CIOs and CFOs alike. Business-critical mainframe applications often constitute invaluable assets, their embedded business logic representing years of development and evolution. Among large enterprises, these assets represent 60% - 70% of all business-critical applications consuming two-thirds of IT's operations budget. Migrating these applications from mainframes to open systems can reduce the operations cost substantially and unlock the business logic for faster evolution and greater re-use in enterprise SOAs.

Three key success factors emerge from numerous mainframe re-hosting projects:

- Leveraging automation and proven migration practices to reduce project risk and its duration—to ensure a predictable time horizon to visible cost reduction and demonstrable business value

- Preserving the application's business content—application logic and its valuable data—to rapidly achieve functional equivalence, minimize business impact, and avoid re-training
- Architecting an open system target environment to meet mainframe-class reliability, availability, scalability, and other QoS requirements—to ensure that migrated applications continue to meet performance and availability SLAs

Meeting these challenges requires a uniquely powerful database and application platform—one that natively supports key mainframe languages in a mainframe-compatible online and batch runtime, enables automated migration of application code and data, and delivers proven, mainframe-like QoS on open systems. It must also provide added flexibility to rapidly integrate re-hosted applications in an SOA and extend them with Java or .Net components as business needs evolve.

Oracle Delivers for Mainframe Customers

While some organizations delay because of risk concerns, Oracle customers have embarked on this modernization journey with confidence. The robust foundation provided by Oracle Database and Oracle Tuxedo deployed in Oracle's Maximum Availability Architecture (MAA) ensures mainframe-equivalent or better availability and performance on the Oracle technology.

Facts: Five trillion dollars in daily inter-bank settlement transactions globally. €110B in annual healthcare reimbursement payments in France. 50B annual credit card transactions in China. 150M daily logistics transactions in US. 1M government benefit transactions an hour in US. 56K mobile billing transactions per second in Japan.

One system. Oracle Tuxedo.

The evidence is in—proven five 9's of availability in many customer production environments delivering business-critical financial services, mobile billing, managing reservations, and handling government benefit transactions. A number of these applications run at tens of thousands of transactions a second (tps), and in some customer benchmarks Oracle Tuxedo and Oracle Database/RAC exceeded 100,000 tps.

Mainframes are well known for their high quality of service attributes, but the cost is very high. Oracle customers have experienced mainframe-class reliability and performance after migration to open systems and have gained additional scalability and availability advantages at a fraction of the mainframe upgrade cost.

Customers Reduce Costs, Gain Flexibility

For one customer, migration from IBM CICS/DB2 environment to Oracle Tuxedo and DB/RAC has enabled a 700x increase in volume of data traffic and processing required to support new modes of client interaction. This level of scalability wasn't affordable with mainframe OLTP and database processing. As the result of the migration, the customer experienced about 25% performance gain in online and batch processing and was able to take advantage of a cost-effective scalability architecture provided by Oracle's database and application grid. Leveraging a portion of \$5M/year in savings from decommissioning most of the mainframe infrastructure has also enabled them to deploy live-spinning disaster recovery capabilities for business continuity.

Another customer has replaced 12,000 MIPS of mainframe capacity with Oracle Database and Tuxedo infrastructure on IBM pSeries servers, in the process reducing their annual costs from \$65M to \$10M. This customer is

handling health insurance services in France for over 50M members and supports over 80,000 users, generating over €110B in annual reimbursement payments. Migrating data and applications from disparate mainframe environments to a single open systems stack enabled them to extend the functionality with component-based approach. The extensibility of Oracle Tuxedo with Oracle Fusion Middleware solutions enabled more agile response to frequent regulatory changes, and helped them to run claim processing services for other government agencies.

Managing Migration Project Risks

A proven methodology focused on risk mitigation is an essential ingredient in successful migration projects. This typically starts with a comprehensive discovery process where Oracle Modernization experts delve into the details of the mainframe environment and applications, including the overall architecture, supported interfaces, functional and technical dependencies, integration requirements, SLAs for performance and availability, etc. The discovery process also focuses on target architecture requirements, grid vs. SMP-style deployments, platform choices, development and test requirements, and enterprise standards for High Availability and Disaster Recovery configurations. This comprehensive discovery process results in a report that documents the findings, maps source environment to target, and provides a set of recommendations that customers can use to guide the project.

In some cases, an assessment at the code and data level may be performed to determine the level of complexity, usage patterns, data access patterns, and identify any components that need additional analysis. The assessment is also used to identify a subset of the application for potential pilot migration. The role of a pilot project is three-fold:

- (1) Migrate a part of the application and data to validate the coverage in the automated tools (and supplement it if necessary)
- (2) Deploy a portion of the application on the target architecture, and optionally benchmark it to validate the performance and other SLAs, and apply the results to capacity planning for full application
- (3) Validate the testing approach and verify that customer's test libraries provide sufficient coverage. If needed, automated capture of test cases from the production environment can be used to quickly broaden the test coverage. Similarly, automated compare tools speed up comparing the results from rehosted application with its mainframe baseline.

A pilot project provides a wealth of information that can be used to adjust the project plan and migration toolset based on the actual application environment, and thus increase the confidence in the overall plan and speed up the rest of the migration project.

The Bottom Line

Your partnership with Oracle presents a unique opportunity for you to get more value from your legacy applications, while greatly reducing their infrastructure cost. With Oracle's mainframe rehosting solution you get a unified, flexible technology platform that combines the mainframe-class RASP with advanced rehosting capabilities, supported by Oracle training, support, and consulting services and a broad ecosystem of delivery partners. Freed from the mainframe lock-in, your application assets help you to get the most from your business.

CONTACT US

To learn more, call +1.800.ORACLE1 to speak to an Oracle representative or visit oracle.com/technologies/modernization/re-hosting.html

