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An interview with Oracle's Mark Rakhmilevich

Oracle and Metaware are working together to bring **mainframe modernization into a new era**. The results of their collaboration **lower costs and risk for customers who want to move valuable legacy applications to more modern and more productive platforms**.

Mark, who is interested in mainframe migration today?

Mainframe users are under a lot of pressure these days, both because of the financial crisis and because they need to evolve their applications and infrastructure to meet new business needs. They often spend up to 60 to 80% of their budget just on maintaining legacy infrastructures and applications. In addition to being expensive to maintain, these infrastructures are very rigid and hard to change. But customers need to free up budget for other IT priorities. Some are not really aware of the alternatives to the mainframe and are fine with what they have. But many are becoming aware of the tremendous cost difference between the mainframe and open systems like Unix, Windows, or Linux. A large U.S. bank mentioned to me recently that every time they need additional capacity they have to call IBM, and IBM just rolls up a couple of trucks and tells them how much it's going to cost, and they pay it. But they can't afford to run their business like that anymore. They need alternative options and want to evolve their core IT infrastructure in a more flexible and competitive manner.

“Customers are aware of the tremendous cost difference between the mainframe and open systems”

Users have been concerned about the high cost of mainframes for a long time. What's different now?

We've seen changes in two areas. First, the level of concern over costs has grown significantly in recent years. It is a lucky IT organization that has a flat budget compared to previous years. Some have seen their budgets reduced 20% or more. Addressing these cost pressures requires looking at the biggest line items in the budget, so invariably this involves mainframes in any cost reduction initiative.

Mark Rakhmilevich is Director of Product Management for Tuxedo and Mainframe Modernization at Oracle. He focuses on integrating Oracle technology with partner solutions that help customers reduce the cost and risk



of migrating mainframe applications to Tuxedo and WebLogic platforms. Mark works closely with customers in the U.S., Europe, and Asia. He has extensive experience in system design, software and systems architecture and has taken part in IBM MVS, VM, and AIX architecture development in his early years at IBM. He is a co-author of *Oracle Modernization Solutions* book. Mark has an MS in Computer Science from State University of New York at Albany, and BS in Computer Science from Lehigh University.

Second, the risk balance has changed: technology obsolescence and skill attrition are increasing the risk on the mainframe side, while robust open systems technology and Oracle's mainframe-class rehosting solution combining the Database and Tuxedo are decreasing the risks on the open systems side. The increase in cost pressures together with greater acceptance of mainframe alternatives is leading to a lot more customers being ready to make the move. Customers have applications that have been created over 20 or 30 years, and they want to keep running them for another 20 to 30 years. A key requirement for them is strong mainframe class infrastructure on open systems, and the migration solutions that lower the risks and costs of the migration. Oracle has invested in solutions that address these needs by delivering the Oracle Tuxedo Application Runtime for CICS and Batch and the Oracle Tuxedo Application Rehosting Workbench, which leverages Refine[®]'s language processing capabilities, to lower the risk for customers who were on the fence with regard to migration. We're focused not only on growing our market share, but also on radically changing the acceptability of this

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approach so the overall percentage of mainframe customers looking for migration paths off the mainframe increases significantly. We want customers to feel comfortable in making this journey with Oracle because we have the infrastructure, the solutions, the support and services that make Oracle a compelling alternative to IBM – an alternative that makes business sense.

How does Tuxedo Application Runtime work?

The runtime provides support for emulating CICS APIs and Batch functions on top of distributed application grid infrastructure powered by Tuxedo. This enables online and batch applications to be rehosted with no or minimal change in code and data, while helping customers to deploy them over a robust, scalable, and cost effective distributed infrastructure. This is really the key to rehosting success – reducing risk and cost by avoiding code changes, while taking advantage of a more flexible infrastructure at dramatically lower TCO.

In addition, we're providing these capabilities on the most scalable, highest performing application server on the market, Oracle Tuxedo, which many customers use and love. Tuxedo has proven itself over the years in many mission-critical customer applications, delivering "five nines" of reliability and handling 10s of thousands of transactions per second, in fact, reaching over 100K tps in some customer benchmarks. With its robust application server core, scalable clustering, grid architecture, dynamic load-balancing, built-in HA and DR capabilities, etc. it can provide the unmatched infrastructure to run mainframe-class applications with the same RAS and performance as the mainframes. As a core part of Oracle's application grid it enables migrated mainframe applications to meet peak demand and improve overall performance by sharing resources. It also allows for rapid application deployment and automated dynamic adjustments—enabling elastic capacity, which brings greater efficiency, competitiveness, and simplification in the IT environment.

“Oracle provides a compelling mainframe alternative platform at a fraction of a mainframe cost and Metaware r4z provides a full-function migration factory”

“We lower costs and risk for customers who want to move valuable legacy applications to more modern and more productive platforms”

Many customers tell us that they don't just want to rehost their COBOL code and leave it in a black box, they also want to extend these applications, integrate them within an enterprise SOA, leverage modern declarative approaches like BPM and Rules Engines, take advantage of robust BI capabilities, and extend legacy applications with new components in Java, .NET, or modern scripting languages which can tightly integrate with the rehosted application services. As part of Oracle Modernization solution we help customers who rehosted to Oracle Tuxedo to leverage its rich extensibility, the broad SOA, BI, and other capabilities of the Oracle Fusion Middleware, and Oracle Applications as part of a strategic modernization roadmap. That is a compelling value proposition that is very different than what was on the market until now. Oracle offers modernization writ large applications with the same RAS and performance as native mainframes. That is a compelling value proposition that is very different than what was on the market until now. Oracle offers modernization writ large.

What about languages other than COBOL, or mainframe transaction monitors other than CICS?

We are working on adding support for other mainframe environments and transaction monitors. From the language perspective, COBOL is probably what 90% of all mainframe code is written in, so we've concentrated initially on this most critical requirement. But there is no reason why we can't support other languages. The core services in Tuxedo don't change, it's just the language bindings that are different. We are looking at other languages and environments that are popular in certain geographic regions or certain industries. Some of these requirements can be met by additional partner solutions today, including a number of additional capabilities that Metaware can provide on top of the Oracle solution in terms of additional languages, 4GLs, and other databases.

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How have Oracle and Metaware been working together?

Metaware has built a strong reputation over the years as a leading mainframe migration expert leveraging Tuxedo and Oracle Database as its core target architecture for some of the largest mainframe migration projects, including some in 10,000 – 20,000 MIPS range. Oracle and BEA before it was acquired by Oracle have worked with Metaware on mainframe modernization projects for a number of years. With Tuxedo becoming part of Oracle Fusion Middleware, we took things to the next level, moving to a closer partnership and joint development. We share the same view of what customers need – a robust and simple migration path that removes the complexity often associated with past rehosting projects, streamlines the migration process through increased automation tooling, and enables customers to take full advantage of a distributed architecture. Oracle and Metaware worked to design and enhance the tools and the runtime components to deliver to this common market vision and have invested in the core technology, like a native CICS API and runtime in Tuxedo and enhanced workbench tools for code and data migration. Because Oracle has a broader footprint in the market, we can take the resultant solution to customers and system integration partners.

What are the advantages for customers of Oracle's partnership with Metaware?

Metaware Refine[®] is a very sophisticated rules-based system that uses certain techniques borrowed from expert system development and handle application and data migration with highest degree of automation and industrialization. In the past getting the most out of a tool like this required someone with deep understanding of its internals and ability to manipulate the rules at a very deep level. We have worked with Metaware to make Refine[®]-based tools accessible for more mainstream developers and many of our system integrator partners. We took a very powerful system and simplified it into a set of well-defined tools focused on the specific capabilities our customers needed to rehost their core application assets: COBOL and JCL transformation, CICS resource definitions, VSAM and DB2 data migration. Then we packaged it and made it easier to use by customers who want to do their own migrations and system integrators who are delivering mainframe rehosting services using Oracle solution. Metaware has packaged additional

Refine[®] capabilities in its r4z product, which has additional features that can be used to address more specific needs and the full lifecycle of customer projects. With r4z, customers and systems integrators have access to a full-function mainframe migration factory that complements Oracle Tuxedo Application Runtime and Rehosting Workbench products.

For more information about the new **Oracle Mainframe Rehosting Products for Oracle Tuxedo 11g**, please visit www.oracle.com/tuxedo or contact Mark Rakhmilevich at mark.rakhmilevich@oracle.com. Join the LinkedIn 'Tuxedo Users and Practitioners' group at <http://www.linkedin.com/groups?gid=1941827>

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