Daimler Chrysler Bank

DC Bank wanted to improve the delivery, recovery and performance of its WMQ infrastructure by

- *providing a capability to confirm the timely delivery of WMQ messages and to track the missing messages*
- *being able to provide point-in-time and full recovery of messages and queues*
- *improving DC Bank's overall WMQ performance capability.*

Daimler Chrysler™ Bank Finds WebSphere® MQ Messages With ReQuest™

Daimler Chrysler Bank

Daimler Chrysler Bank is recognized as one of the leading vehicle financing institutions in Germany. The bank provides private and corporate clients with its range of flexible financial packages in a highly secured environment. DC Bank's offerings include financing, leasing, insurance, fleet management and, since July 2002, credit facilities for Mercedes-Benz™, Smart™, Chrysler™, Jeep™ and Setra™ brands. To satisfy the innovative and exacting demands of its clients, DC Bank constantly enhances the spectrum of its financial services.

The dynamic nature of these financial services requires that Operations, Sales and ultimately consumers have immediate access to accurate and relevant data. DC Bank maintains an extensive network of web-based applications to deliver critical information about products and services to its internal and external clients.

IT Background

The backbone of DC Bank's consumer and dealership IT systems is a series of highly integrated and tightly secured applications that utilize IBM's WebSphere MQ messaging solution on 42 CPUs in a multi-vendor HP and Windows based system. As various client and dealership data is captured and handled, WMQ is the mechanism by which multi-platform applications communicate with and process the required business information. It is of utmost importance that effective measures are in place to ensure the delivery of resulting WMQ messages, to provide an audit trail for reporting, tracking, auditing and recovery of business transaction activity, and to allow recovery of lost messages and WMQ objects.

The Challenge

DC Bank wanted to improve the delivery, recovery options and performance of its WMQ infrastructure by

- *providing a capability to confirm the timely delivery of WMQ messages and to track the missing messages*

1 Lammas Gate, 84a Meadrow, Godalming, Surrey GU7 3HT UK
UK : 44 14 83 23 93 00, USA : 1 914 238 7900 email : info@cressida.info

Daimler Chrysler Bank

"Evaluation of the WMQ Recovery Logs with the WMQ provided utility "dmpmqlog" was not effective. Even simple tasks like searching for an already identified and specific message, its accompanying MQPut, Commit or back-out, turned out to be immensely difficult."

"It was clear from the beginning that the WMQ Recovery log files contained all the required data to meet DC Bank's requirements. It was a DC Bank requirement that this data should be used in any solution."

- *being able to provide point-in-time and full recovery of messages and queues*
- *improving DC Bank's overall WMQ performance capability.*

The responsible Application and System Administration staffs faced several challenges: how to easily and quickly find missing messages, how to identify application issues related to misplaced messages, how to perform time based recovery procedures, and how to conduct more effective performance analysis.

- **Delayed or Missing Messages**
  - One common problem is a message that is processed by the receiving program either incorrectly, with a delay, or not at all. As every WebSphere® MQ Series administrator knows, WMQ is frequently blamed as the culprit. Since WebSphere MQ does not lose any persistent messages (assuming no serious mistakes from the administrator), it is essential to have a procedure to easily identify that a message was available on the destination queue at a given time. Using the IBM-supplied "dmpmlog" utility makes finding and tracking specific messages a very time-consuming and difficult process.

- **Point-In-Time Recovery**
  - To achieve a flexible and comprehensive recovery environment, both "point in time" and "full recovery" procedures should be available and executed within DC Bank's expected service levels. Nearly all serious recovery related issues can be addressed using one of these two methods.

- **Performance analysis**
  - As WMQ performance problems are experienced, it is essential that WMQ Throughput Times, Transmission Delays and Queue Utilization statistics are analyzed and investigated. Using this information is the most efficient way to calculate whether the problem lies within WebSphere MQ or elsewhere.

1 Lammas Gate, 84a Meadrow, Godalming, Surrey GU7 3HT UK
UK : 44 14 83 23 93 00, USA : 1 914 238 7900 email : info@cressida.info

Daimler Chrysler Bank

ReQuest™ uses unique filtering technology to analyze critical message activity information already contained in WMQ Logs.

ReQuest™ is non-intrusive, no application changes are needed.

Heier indicated that

"After the initial contacts were made, we found that the product capabilities do in fact cover all the key areas we were interested in. All of the tests concluded with our complete satisfaction."

The Search

According to Karl Heinz Heier, Senior Consultant Middleware Services – DaimlerChrysler Bank AOP Division, "It was clear from the beginning that the WMQ Recovery log files contained all the required data to meet DC Bank's requirements. It was a DC Bank requirement that this data should be used in any solution."

Direct access, analysis and use of the log files have the obvious advantage that WMQ is not burdened by other available methods such as Channel Exits or by writing an in-house Application Wrapper. These approaches are intrusive by nature and exert additional overhead on the application and WMQ systems on which they are employed. Use of the readily available logs avoids this added overhead and also means there would be no added requirement to collect and maintain additional historical data files.

Heier stated that "Evaluation of the WMQ Recovery Logs with the WMQ provided utility "dmpmqlog" was not effective. Even simple tasks like searching for an already identified and specific message, its accompanying MQPut, Commit or back-out, turned out to be immensely difficult. Extensive scripts had to be developed and maintained. The possibility of in-house development for log evaluation was quickly rejected due to resource requirements and the lack of log documentation."

The Solution

The search for a commercially available and viable solution led DC Bank to ReQuest™ from Cressida Technology Ltd., a WebSphere MQ solution provider with offices in several European locations and the United States.

cressida™ ReQuest™ for WebSphere® MQ

"Our initial analysis indicated that ReQuest™ could fulfill all of our requirements" commented Heier.

Cressida's Request™ for WebSphere MQ is a powerful Message Tracking, Message Reporting, Message Replay, Point-in-Time Message Recovery and Auditing solution. ReQuest™ uses unique filtering technology to analyze critical message activity information already contained in WMQ Logs. ReQuest™ is non-intrusive, no application changes are needed and it provided DC Bank with exactly the features they required to support their Service Level Agreements.

Heier indicated that "After the initial contacts were made, we

1 Lammas Gate, 84a Meadrow, Godalming, Surrey GU7 3HT UK
UK : 44 14 83 23 93 00, USA : 1 914 238 7900 email : info@cressida.info

Daimler Chrysler Bank

"With the help of ReQuest's "Propagation Report" that shows the activity of related messages regardless of their origin, nearly all lost messages and other problems like incorrect translation errors can be quickly identified and corrected."

"Overall, ReQuest™ ensures that all necessary situations can be analyzed and eliminated more quickly and more easily than before, reliable queue utilization statistics can be created and performance problems can be identified early before they become a serious production problem."

found that the product capabilities do in fact cover all the key areas we were interested in. ReQuest™ was installed on 4 of our multi-processor test machines and WMQ recovery logs from a number of systems were used to evaluate ReQuest's Reporting, Message Tracking, Message Auditing, Message Replay and Message Recovery functions. As with all new tools in a given environment, we had some questions and issues that were all answered and addressed. Tests concluded with our complete satisfaction."

Heier noted "The tool is currently used in our production environment. ReQuest™ gives us control over practically every fault situation by analyzing the available WMQ recovery logs. In addition, ReQuest™ is used for application errors and design analysis in our development and test environments. With the help of ReQuest's "Propagation Report" that shows the activity of related messages regardless of their origin, nearly all lost messages and other problems like incorrect translation errors can be quickly identified and corrected. Overall, ReQuest™ ensures that all necessary situations can be analyzed and eliminated more quickly and more easily than before, reliable queue utilization statistics can be created and performance problems can be identified early before they become a serious production problem."

Heier concluded "There is one more factor that I would like to comment on. After ReQuest™ was implemented on our production systems, we ran into a WMQ problem which necessitated the recovery of a particular application Queue Manager. It was near closing time when we attempted to use ReQuest™ to help resolve the problem and encountered an issue which we could not readily resolve. A call was placed to Cressida's technical support and we spoke with the support individual on duty. The problem was logged and within 15 minutes both our local German speaking Cressida technical consultant and the responsible R & D development person were on a call to us. Within the hour, the problem was diagnosed and a workaround solution was offered to help us proceed with the recovery procedure.

By the time I left the office later that evening, the necessary recovery of the system had been fully completed. The Cressida team was in direct contact with us throughout to ensure all things were in order. The immediate availability and response of Cressida's technical team to help us at a critically needed time was a clear indication that we had made the right tool and vendor choice".

1 Lammas Gate, 84a Meadrow, Godalming, Surrey GU7 3HT UK
UK : 44 14 83 23 93 00, USA : 1 914 238 7900 email : info@cressida.info

cressida™