SL Corporation® – RTView™ Case Study

OOCL Chooses SL's RTView™ to Help Ensure SLA Compliance for 2.5 Million Annual Shipments

OOCL We take it personally

Monitoring Teams Gain Single-Pane-of-Glass Visibility Into Application Performance

OOCL needed a standardized solution for real-time monitoring and control. With an industry-average downtime cost for container transportation/logistics estimated at $852,000 per hour, it was imperative that their application support and production monitoring teams gain better visibility.

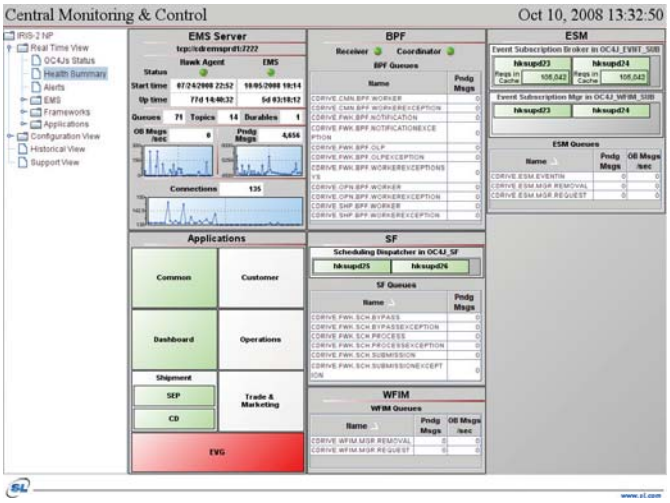
In 1999, OOCL launched a shipment lifecycle management system called the Integrated Regional Information System (IRIS-2). The purpose of IRIS-2 is to optimize business operations, increase productivity, and maintain the company's market-leading business approach: "Create value for our customers by delivering great service at the lowest possible cost."

Project Goals and Challenges

OOCL's primary objective was to ensure the shipment lifecycle management applications that comprised IRIS-2 were running at optimal levels in conjunction with all other aspects of their underlying infrastructure. This was especially challenging because this meant combining modules produced by several teams located in development centers worldwide. Moreover, the production monitoring teams in the Hong Kong headquarters needed to be immediately notified of any issues, and know exactly who to notify and how urgently resolution was required based on business impact.

But, what seemed like reasonable monitoring and control strategies for each module and each team became widely divergent when put together. Each OOCL module development team relied on its own methods to implement monitoring including JSP web pages, custom servlets, and UNIX shell scripts. Due to these siloed approaches, the production monitoring team had great difficulty getting an overall picture of how the system was performing, and struggled to trouble-shoot critical performance issues related to IRIS-2. OOCL needed to define a uniform approach for providing real-time, single-pane-of-glass visibility for the IRIS-2 applications.

In order to achieve this, OOCL sought a solution capable of integrating with all of the sources of data and information involved in running IRIS-2, including J2EE (from Oracle's OC4J server platform) and



OOCL's Central Monitoring & Control Health Summary Screen

C#/.Net platforms. They also brought in information from TIBCO EMS (their messaging middleware platform), as well as TIBCO Hawk, TIBCO BusinessWorks, and their own custom applications.

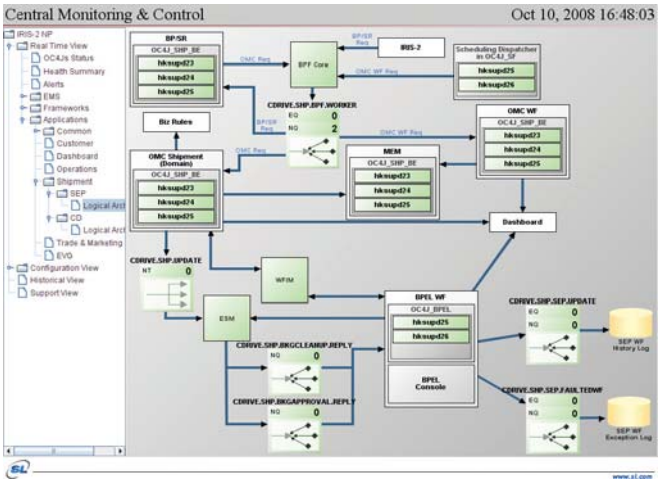
In addition, there were growing concerns about productivity losses due to false alarms. IRIS-2 can track up to 55 milestones for each of OOCL's 2.5 million annual container shipments worldwide. If a milestone showed as "missed" due to system failure rather than actual service problem – a false alarm – IRIS-2 would trigger a multitude of unnecessary tasks for the company's 1,700 customer service staff members, diverting them from real issues that may require attention.

OOCL Central Monitoring and Control

Timing, availability and accuracy of information were critical to OOCL's ability to deliver quality service to their customers. If large bottlenecks occurred due to system outages, they risked breaching service-level agreements and negatively impacting their customer-centric reputation.

Orient Overseas Container Line *(OOCL) is a well-known and respected international container transportation, logistics and terminal company based in Hong Kong. Founded in 1947, they are a leader in the global container transportation market, with over 230 office locations in 58 countries, and over 6,500 employees worldwide.*

SL Real-Time Visibility



OOCL's Central Monitoring & Control Logical Architecture for Shipments

After analyzing the effort to build a central monitoring and control solution in-house, and a brief look at Oracle's Enterprise Manager for monitoring the internally developed applications, OOCL turned to SL Corporation and selected RTView, a real-time Application Performance Management (APM) platform, in August 2007. With the work of a single developer, they were able to have a completely customized, central monitoring and control solution in-place in just over four months.

SL's RTView enables OOCL to monitor its end-to-end shipment lifecycle management system across all servers, databases, and subsystems in real-time through customized dashboards, reports, and alerts. RTView was able to easily integrate and interact with OOCL's applications, as well as the supporting infrastructure including Oracle's OC4J platform, and TIBCO EMS, Hawk, and BusinessWorks.

The health summary screen gives the company's production monitoring and application support teams an overview of all of its applications from a single display. From this summary display, the team members can drill down to dashboards at the component level to quickly determine root cause.

Using RTView's Builder, they were able to create customized displays that tie directly to OOCL's business process flow models. This enables the teams to pinpoint an issue in the context of a business process, and understand how that issue might impact the business.

OOCL's application support team is further leveraging the RTView Historian to analyze historical data trends and proactively forecast the infrastructure resources needed to meet transportation and logistics demands during specific time periods.

Why RTView?

RTView's Builder enabled OOCL to create customized displays quickly and monitor multiple environments without requiring additional development. They could re-use displays for different environments, use "Smart" copy and paste of data sources, and leverage drop-down displays for easy re-call of destination names and paths.

"RTView is a very effective product for building real-time visibility solutions, and the team from SL has the knowledge and experience that perfectly complements their innovative offering," said Matthew Rosen, Director of Application Development for OOCL.

RTView provided OOCL with the flexibility to be able to analyze issues as their end users see them, in the context of an end-to-end business process flow, enabling their customer support teams to provide faster, and more efficient, problem resolution for their customers.

The Results

With real-time alerts targeted to the right people, OOCL's support teams are now able to quickly diagnose the root cause of performance issues, and have reduced their "mean time to diagnose" an issue from ~1 hour down to a mere 2 minutes.

"All it takes is just five minutes of your time every day to know what is going on in the production system. This has enabled us to act proactively and take corrective action before problems can take hold," says Hariharan Lakshmanan, OOCL's Manager of Framework Development.

With customized displays that tie directly to OOCL's architecture, and with drilldown functionality enabled, each team member can now view critical information in exactly the way he/she needs it. This has resulted in a significant reduction in the amount of time each team spends on monitoring, from an average of 4 hours per day (scanning detailed log files located on each server) down to 5 minutes, freeing the company's teams to focus on higher priority issues.

Other monitoring solutions allowed OOCL to monitor different aspects of its systems (size of queue, latency, response time) – individual metrics. With RTView, OOCL is able to create a picture of the end-to-end business process flow, and then show *all* relevant metrics in the context of that flow. OOCL is also able to pinpoint exactly where the process is failing, and assess the overall business impact of issues in order to make the best business decisions.

"In addition, the business impact of a problem can be determined at-a-glance so that appropriate system end users can be alerted and contingency plans put into effect quickly," Mr. Rosen added.

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