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Success Story #42

Client

Global Integrated Communications Services Firm

Problem

As part of a continued effort to streamline their business processes, the client found the need to track the performance of equipment at each of their 30 printing and binding facilities. In order to ensure that equipment is being well maintained and used at peak efficiency, a myriad of variables from each individual machine must be collected and stored for trend analysis. Based on this analysis, adjustments are made to production scheduling, to ensure that machines are in use continuously, as minimizing downtime maximizes profit. As the system was rolled out on the shop floors, the client noticed that it was running slowly. In addition, management decided that they wanted the monitoring system to integrate with the production scheduling system, to enable adjustments to each machine's workload as quickly as possible. Business Solutions was called in to fix the performance problem with the current system (developed in-house), and design and implement the scheduling-integration module.

Solution

In order to solve the speed problem, it was determined that a means of performance testing the database server and application must first be established. After a thorough examination of the program's background, Business Solutions staff designed a process that monitors the performance of all components of the application (hardware, queries, etc.) without impacting its current operation. Once in place, the performance monitoring process turned up inefficiencies in some of the queries run by the system, as well as a few minor server problems. They were quickly addressed and the speed of the application increased dramatically.

For the integration module to be effective, it had to be designed so modifications to the code would not have to be made when the structure of either data warehouse involved was altered. With this in mind, Business Solutions' staff outlined and built a system that extracts data from the production scheduling system (housed in Oracle), brings it into the master equipment-monitoring application (housed in SQL Server) and sends it down to the individual machines on the floor. Data from those machines is then pulled back up into the master monitoring application, transformed, and loaded back into the scheduling system. All of this is accomplished with routines that are not tied to the structure of either database. When changes are made, the administrator simply needs to make note of them in a special table – no programming necessary. Development of this module has enabled the client to reduce costs associated with manually changing the production schedule, as well as examine machine statistics and scheduling data from a central location.

Technology Applied

Complete Application Design and Analysis, Microsoft SQL Server, Oracle, SeeBeyond