Surtel Technologies

- Case Study -

MRP Performance Improvement

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Solution Summary

One of the main components of the Supply Chain is the Material Requirements Planning (MRP) process. Interruptions to this process will result in delays that will impact customer satisfaction levels. Our client, operating in a global manufacturing environment, experienced one of these supply chain interruptions. The cause of the interruption was traced back to the daily MRP program with a run time of more than eight hours.

Surtel implemented solutions in several areas and reduced the MRP run time by 75%. The reduction of MRP run time allowed the client to effectively manage their Global Supply Chain business.

Solution Profile

Our client is a manufacturing and distribution company with more than 250,000 items and 100 branch plants in their JD Edwards ERP system. The long running MPR program created many issues for the buyers and planners in their Global Supply Chain.

With businesses in different time zones all over the globe, it was very important for the MRP requirements generation program to complete as soon as possible. The initial run time of more than eight hours was unacceptable to the business. This was further complicated because the planners had to process the MRP requirement messages while the program was still running. They reacted to incomplete requirements that led to inaccurate promise dates, shipping delays and reduced customer satisfaction on a global scale.

Surtel performed a detailed study, and the causes of the extended run time were identified. The key issues were as follows:

- Incorrect item planning data in the JD Edwards system: There were many items in the system with incorrect manufacturing data setup. For example, manufactured items did not have a valid bill of material, purchased items did not have lead-times, and in general, the manufacturing data setup did not accurately reflect the actual manufacturing process.
- The MRP program was searching for requirements in obsolete or decommissioned branch plants.
- Supply and Demand Inclusion Rules included obsolete and unnecessary order types.
- Performance-enhancing opportunities within the MRP program's processing options were not activated.

The study concluded with the identification and testing of both technical and functional enhancements that reduced MRP run time and improved customer satisfaction. The key solutions implemented were:

- The parallel processing option was activated and a technical analysis completed to verify its effectiveness. Parallel processing was used to distribute the MRP program's workload over six processing queues that resulted in a drastic reduction of run time.
- Items that required planning data setup corrections were identified and data cleanup coordinated with the user community.
- The processing option for MRP net change was activated. This reduced the number of items that MRP reviewed; only items with changes in requirements were processed.
- Processing options were modified to exclude work order items with a closed status of "95". Processing time was reduced because the MPR program no longer exploded messages for the lower level items on closed work orders.

The performance improvement enhancements were implemented in less than eight weeks and the following results were achieved:

- Parallel processing was implemented which substantially reduced the run time.
- Ad hock reports were created and the item planning data analyzed. Items that required data setup corrections were identified and a list of items forwarded to the respective users. Surtel consulted with users in the cleanup effort and conducted training when requested. The result of this effort was a reduction in run time, improved planning accuracy, realistic promise dates and improved customer satisfaction.
- Supply and demand inclusion rules were modified to reflect the actual supply chain process.
- A 75% reduction (reduced from 8 hours to 2) in MRP run times was achieved by the combined efforts of the enhancements implemented by Surtel.

Distinguishing Feature

Surtel strives to provide their clients with a strong return on investment when implementing customized solutions. We deliver custom configured solutions for every client, incorporating software modifications for strategic process gaps only. Our JD Edwards knowledge, proven methodologies and business solutions enable our clients to be successful. We are experts at training, mentoring, and knowledge transfer. Our goal is to implement quickly, provide knowledge transfer and turn over support to our client's staff.

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