



Software Works (SWI)  
CDC/Ross Systems Authorized Services Partner



## CUSTOMER DETAILS

[www.wikoff.com](http://www.wikoff.com)

INDUSTRY: CHEMICALS

### CHALLENGES

- 2005 database performance of Ross ERP MS SQL Server was not acceptable.
- Significant degradation with:
  - Process specification activation time of 2 hours
  - Cost rollup of 2 hours
  - Dispatch creation of several hours

### SOLUTION

- Analysis/implementation of weekly and monthly DB maintenance tasks, such as defragmentation of indices.
- MS SQL Server configuration control changes because out-of-the-box settings are skewed toward VERY conservative—and resource intensive—setting.
- Analysis of query optimizations resulting in creation of many additional new indices on MAN DB.
- Operational review and training changes to avoid locking conflicts with customer service and shipping (dispatch).

### RESULTS

- 300% performance increase in cost rollup execution.
- 30% improvement in process specification activation.
- Issue with dispatch note creation locking solved with business process change.

## ENHANCED ROSS ERP PERFORMANCE WITH MICROSOFT SQL SERVER DATABASE TUNING

### BACKGROUND

Wikoff Color Corporation is a manufacturer of printing inks, varnishes, and coatings for the graphic arts industry. Wikoff primarily manufactures tailor-made products that require tight specifications and the highest levels of quality and consistency. The staff at Wikoff is prepared to provide the best service in the industry by being more knowledgeable and better trained than the competition.

Wikoff has 30 users, 32 manufacturing locations and two sales/service centers, each with a profit center, and a total of 600 employees. The Wikoff implementation focused on the initial site implementation with fast-track implementations for the remaining locations.

Wikoff trusted Software Works, Inc. to implement their Ross ERP distribution and manufacturing modules. They selected SWI to complete their implementation because of SWI's demonstrated history of success and deep experience with the Ross ERP solution.

Following the implementation of the Fort Mills site, and very shortly after the go-live date, users began to experience significant performance problems. This problem was causing both production and delivery issues for Wikoff and required fast action.

### OBSERVATIONS

**MS SQL Server Performance Degradation: A growing problem ignored by companies and compounded by the myth that Microsoft's SQL Server database requires no maintenance.**

Even well-equipped servers can experience significant database performance degradation problems. As more Wikoff staff and Ross ERP functionality were brought online, significant performance issues came on quickly.

With their new implementation barely "live," process specification activations and cost rollups were critical functions Wikoff personnel had to execute, and they were waiting literally hours for these functions to complete.

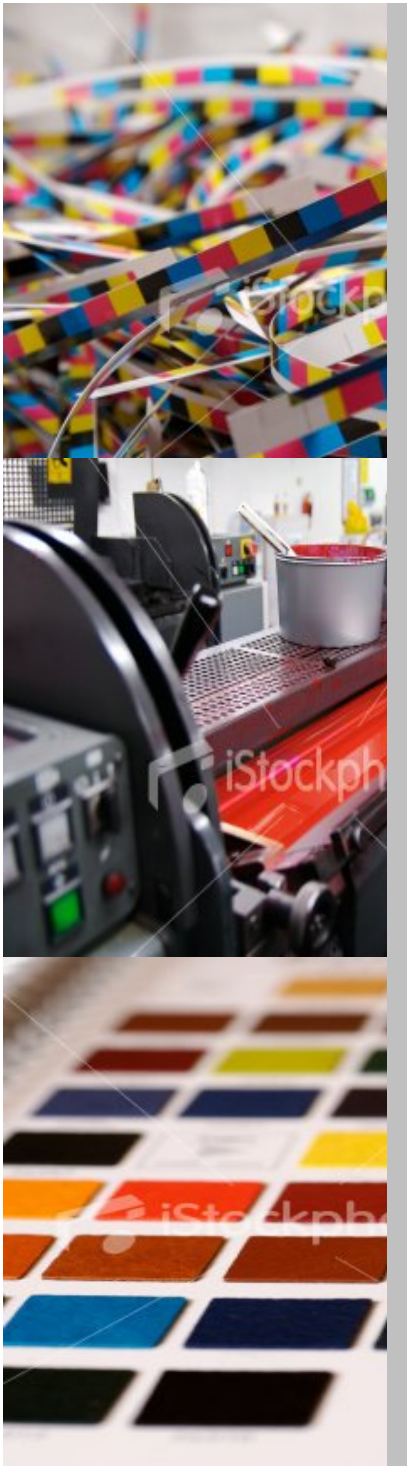
### SOLUTION

To address their performance issues, Wikoff engaged the Managed Technology Services Group of SWI. Their expertise is in the described challenges, along with providing IT infrastructure analysis and monitoring and remote database management.

SWI's initial effort was to analyze and address overall performance issues which quickly identified the database configuration and tuning issues as the major culprit.



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In addition, three critical application processes were also reviewed and found to be causing a great deal of performance pain. So with two MS SQL Database Administrators armed with the database performance analysis tool from Idera ([www.idera.com](http://www.idera.com)) and the Enterprise SQL Server "db tuning advisor" SWI made many discoveries.

A few example changes made at Wikoff follow; however, please note that performance varies with each client's environment so there is no "magic bullet." Each client's situation must be evaluated individually and a unique solution determined. However, there may be useful ideas here for your DBA to review.

- Database configuration changes were made to row versioning, from snapshot isolation to just "read committed," to reduce I/O on the TempDB but increase chances of concurrency. At Wikoff the tradeoff worked.
- Index rebuilds generated performance gains. For example, the scan density on IC\_Product\_Characteristics is now over 90% and Logical Fragmentation is almost non-existent.
- SQL Server Trace isolated problematic SQL requests which lead to new indices such as:

```
ADD INDEX WIKOFF_PROCESS_SPEC_STAGE_2 &
/TABLE=PROCESS_SPEC_STAGE &
/DUPLICATES &
/FIELD=COMPANY_CODE &
/FIELD=FACTORY &
/FIELD=PROCESS_SPEC &
/FIELD=SYS_VERSION_NUMBER &
/FIELD=STD_RECIPES &
/FIELD=PM_RECIPES_VERSION_NUMBER
```

**SUMMARY**

Though many immediate changes eased the initial pain, there will always be an ongoing tuning effort, especially as the new remote sites go online.

If your MS SQL Server or Oracle database isn't performing as needed, or you'd like to have a database health check to ensure that your database data, security, and recovery are healthy, please call Gavin Weldon, SWI's Business Development Director at 678-819-3902.

**North American Offices USA and Canada**

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