Dynamics NAV Performance Tuning and Optimization Services

For most Dynamics NAV implementations on SQL Server, performance problems are minimal and the system runs flawlessly. However, in some situations, users may experience performance degradation, typically occurring with large databases and high transaction volumes.

Since each of these circumstances is unique, there is no standard solution that can be applied in all cases. Through our experience working with some of the largest NAV and SQL deployments in existence, we have created the following proven process:

System Health Check

During this step, we look at the hardware (the server machine as well as the storage system), the Operating System, and the SQL Server setup parameters. Our goal for this step is to review your infrastructure to make sure that it is set up according to general best practices. We report on our findings and make recommendations where necessary.

Database Maintenance

Databases on SQL Server need to be maintained. SQL Server uses internal system statistics and indexes to read and write data, and it is important that they are properly maintained. We review the maintenance on your database and make sure that it is put together properly.

Index Tuning

Every time that data is added, modified, or removed from any table in the database, SQL Server updates all the indexes that are related to those tables. Due to the application's design, NAV databases all have indexes that are actually never used on SQL Server. Updating these unused indexes uses valuable system resources that can cause severe performance problems. We use a simple approach to index tuning. We log actual index usage in your production database, and, based on actual usage numbers, we then disable indexes that are never used.

Code Review

Performance issues can also be caused by the application objects themselves. The order in which tables are locked, the use of inefficient code constructs, and the use of certain programming keywords are examples of things that can all contribute to slow performing application objects. Code review can be very time consuming with no guaranteed results. Because of its unpredictable nature, this is done as a last resort.

Following these four simple steps has brought us tremendous success in helping our customers solve a variety of performance issues.