SQL Database Defragmenter

The Impact of Database and Index Fragmentation

Database administrators (DBAs) are responsible for ensuring optimal SQL query performance. When query response times degrade, the impact can be significant, affecting both end users and business operations. Prior to analyzing execution plans, DBAs must first verify that indexes are properly ordered. Indexes exhibiting fragmentation levels typically exceeding 11–30% require defragmentation.

Index defragmentation generally involves rebuilding indexes and, in some cases, adjusting the index fill factor, as well as identifying full table scans or inefficient join operations. However, these actions only partially mitigate performance issues, as the primary database data file itself may still suffer from physical fragmentation.

Addressing physical fragmentation requires taking the database offline and performing defragmentation at the file level. This approach is suboptimal, as it necessitates server downtime. Alternatively, the DBA may detach the database, perform file defragmentation, reattach the database, rebuild indexes, update statistics, and recompile stored procedures—a process that is both time-consuming and operationally burdensome.

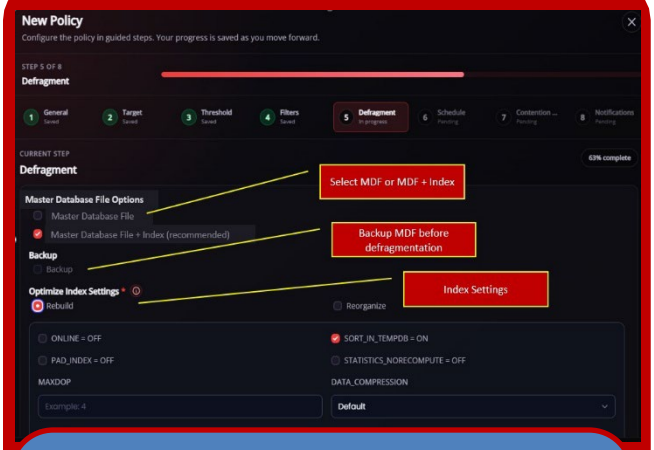
WHY SQL DATABASE DEFRAGMENTER?

Fragmentation within the primary data file and associated indexes has a direct and measurable impact on SQL query performance. To comprehensively remediate these issues, SQL Server database administrators require a solution that automates fragmentation across both the primary data file and indexes.

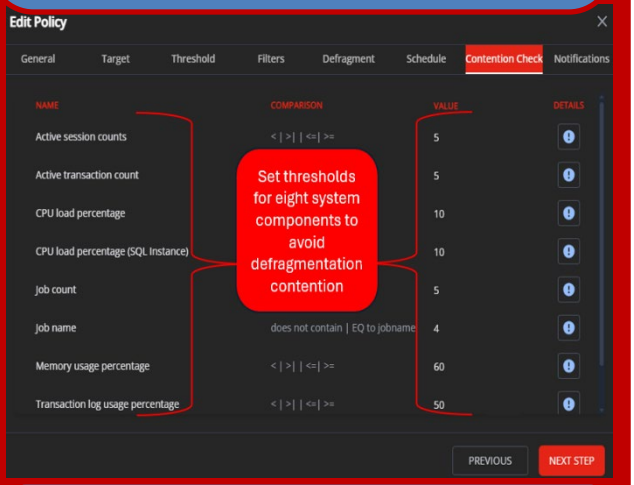
SQL Database Defragmenter enables DBAs to define policies for selected databases, configure fragmentation thresholds and fully automate the defragmentation process. The solution ensures defragmentation tasks are executed only when required, minimizing unnecessary maintenance operations while maintaining optimal query performance.

PRODUCT HIGHLIGHTS

- Automatically detects fragmentation “hot spots” within primary data files and indexes
- Optional database backup prior to initiating defragmentation operations
- Detaches only the targeted database for defragmentation while keeping other databases online
- Performs index rebuild, update statistics, and recompile stored procedures
- Supports on-demand execution as well as scheduled analysis
- Provides 8 system contention checks to validate system readiness before running defragmentation
- Manages index fill factor settings to ensure efficient insert/update performance
- Provides web-based management and comprehensive reporting



SQL Database Defragmenter – *Provides a patent - pending technology that allows you to select Master Database Files and indexes for defragmentation. Supporting best practices, you have an option to backup your database prior to MDF defragmentation. Upon successful completion, you can adjust fill factors, rebuild your indexes, update statistics and recompile your stored procedures*



SQL Database Defragmenter – *As you create policies, you can proactively set thresholds for 8 system components with values that you define. This feature makes sure that there are no potential contentions in SQL server prior to running the defragmentation utility.*

“There is no other product in the industry that allows me to address primary data file and index fragmentation. Finally! Nibiru Software has created a solution that is the total answer to our pain! All I have to do is set it and forget it! SQL Database Defragmenter is a game changer!”
- Senior DBA | Banking Institution

DOWNLOAD A FREE 14-DAY TRIAL AT www.nibirusoftware.com/free-trial

KEY BENEFITS

Automated Analysis and SQL Server Performance Optimization: SQL Database Defragmenter performs an automated analysis of key fragmentation metrics for the primary databases and indexes pinpointing logical and physical page fragmentation hot spots.
Databases that incur high inserts, updates and deletes are prone to primary data file and index fragmentation. This activity causes query response time, high I/O and impact to your business. SQL Database Defragmenter monitors all your fragmentation levels and takes automated action to resolve them issues. When your databases and indexes are defragmented, your optimizer will select the most optimal path to the data.

Proactive System Contention Checks: SQL Database Defragmenter provides the DBA with the ability to check the utilization of 8 key system indicators prior to executing the defragmentation job. This gives the DBA an added benefit of making sure that the policy can run as scheduled and avoid any potential system problems or application bottlenecks.

Alert Notifications: DBAs are notified if a "contention check" prevents the execution of a policy or if there is a problem or delay in executing the defragmentation job.

Index Management: SQL Database Defragmenter allows you to specify how much free space SQL Server should leave on an index page to limit page splitting and shifting. This helps you to me intelligently manage the frequency of index rebuilds.

Centralized Management: The SQL Database Defragmenter provides a web-based user interface where you have a functional real-time view into the top fragmented databases and indexes.

Comprehensive Reporting: SQL Database Defragmenter provides comprehensive reporting of analysis and defragmentation activity, giving DBAs and managers the trends and information they need to ensure that database performance is continuously optimized.

TECHNICAL FEATURES

Powerful, Automated Defragmentation Management

- Flexible, customizable control of defragmentation: Defragmentation processes can be triggered by database fragmentation percentage or scan density, and prioritized based on fragmentation level, or index size.
- Policy-based management: Defragmentation policies can be applied at the server, database or index level to apply the same defragmentation management policy to multiple objects all at once.
- Master Database File Defragmentation: Based on policy thresholds, primary data files are defragmented by detaching the files from the server, performing defragmentation and upon completion reattaching the database to the server.
  - Post defragmentation actions:
    - Rebuild index
    - Update stats
    - Recompile stored procedures
- Backup Best Practices: You have the option to call the native backup utility and backup the database prior to detachment and defragmentation.
- Index Management: Rebuild, reindex, and fill factors can be easily modified through the user interface
- Email notification: Provides notification of the status of policies indicating delays, failures or cancellations.
- Lightweight collection: Fragmentation details are intelligently collected based on customizable automation policies, keeping overhead on your monitored servers low.
- Supports multiple levels of operations: Takes actions at the server level database or at a more fine-grained level for tables or any selected indexes.
- Security and compliance: Supports FIPS 140-2 and FIPS 140-3 validated cryptography

System Requirements

Hardware
CPU: 2ghz+
Memory: 2GB
Disk Space: 30 GB for repository

Operating System	Version
Microsoft Windows	11
Microsoft Window Server	2025, 2022, 2019,2016
Microsoft SQL Server (standard, enterprise)	2025,2022(windows), 2019 (windows), 2016,2014
Supported Browsers	Google Chrome (142.0.7444.176) 64 bit Microsoft Edge (143.0.3650.96)

NIBIRU software
SQL Database Defragmenter

PHONE: +1 713.912.7757
FAX: +1 281.343.3195
www.nibirusoftware.com