

**Index Rebuild Management**

**Purpose:**

The IndexRebuildManagement stored procedure provides comprehensive functionality for inspecting, monitoring, rebuilding, and pausing index operations on a database. It is designed to streamline the index rebuild process with optional execution (via the @WhatIF parameter), allowing users to either display the code or execute the operations. This procedure is versatile and can be customized with specific parameters to fit various index management needs.

**Default Required Variables**

The stored procedure requires the following input parameters for execution:  
  
- @ActionType: Specifies the action to perform. Acceptable values include:  
 - 'Inspect': Displays information about suggested index rebuilds.  
 - 'Monitor': Provides the percentage of index rebuild completion.  
 - 'Rebuild': Initiates or resumes the index rebuild process.  
 - 'Pause': Pauses an ongoing index rebuild.  
 - 'History': Displays the history of index rebuild completions and failures.

• @database\_name: The name of the database where the index is located.  
• @index\_name: The name of the index that is being managed.  
• @table\_name: The name of the table where the index is applied.  
• @WhatIF: Determines whether the procedure should display the work (if @WhatIF = 1) or actually perform the operation (if @WhatIF = 0).

**WhatIF Parameter**

• @WhatIF = 0: Executes the operation as specified.  
• @WhatIF = 1: Displays the code that would be executed, without making any changes.

**Action Examples**

1. Inspect Index for Rebuild Suggestions

EXEC [Perfstats].[action].[IndexRebuildManagement]  
 @ActionType = 'Inspect',  
 @database\_name = 'Database\_name',  
 @table\_name = 'TABLE\_NAME',  
 @WhatIF = 0;

Inspects the index and suggests if an index rebuild is necessary, typically triggered when fragmentation is at 60% or higher.

@index\_name = 'INDEXNAME' can be added if more precise information but without it you will get all the indexes on the table that are over 60% fragmented.

2. Rebuild Index

EXEC [Perfstats].[action].[IndexRebuildManagement]  
 @ActionType = 'Rebuild',  
 @database\_name = 'Database\_name',  
 @index\_name = 'INDEXNAME',  
 @table\_name = 'TABLE\_NAME',  
 @WhatIF = 0;

Initiates or resumes an index rebuild operation based on the provided parameters.

3. Monitor Rebuild Progress

EXEC [Perfstats].[action].[IndexRebuildManagement]  
 @ActionType = 'Monitor',  
 @database\_name = 'Database\_name',  
 @index\_name = 'INDEXNAME',  
 @table\_name = 'TABLE\_NAME',  
 @WhatIF = 0;

Displays the current percentage of completion for the ongoing index rebuild.

4. View Index Rebuild History

EXEC [PerfStats].[action].[IndexRebuildManagement]  
 @ActionType = 'History',  
 @database\_name = 'Database\_name',  
 @index\_name = 'INDEXNAME',  
 @table\_name = 'TABLE\_NAME',  
 @WhatIF = 0;

Displays the history of index rebuilds. While only @ActionType = 'History' is required, the other parameters can refine the search.

5. Pause Index Rebuild

EXEC [Perfstats].[action].[IndexRebuildManagement]  
 @ActionType = 'Pause',  
 @database\_name = 'Database\_name',  
 @index\_name = 'INDEXNAME',  
 @table\_name = 'TABLE\_NAME',  
 @WhatIF = 0;

Pauses an ongoing index rebuild process.

*There is an optional silent parameter @Force. If this variable is passed with @Force = 0, it will abort the index rebuild process without requiring confirmation.*  
  
EXEC [Perfstats].[action].[IndexRebuildManagement]  
 @ActionType = 'Rebuild',  
 @database\_name = 'Database\_name',  
 @index\_name = 'INDEXNAME',  
 @table\_name = 'TABLE\_NAME',  
 @WhatIF = 0,  
 @Force = 0;

**Conclusion**

The IndexRebuildManagement stored procedure is a versatile tool for handling index rebuilds in a SQL Server environment. With parameters that allow actions like inspecting, rebuilding, monitoring, and pausing, it provides flexibility in managing indexes efficiently. The optional @WhatIF parameter allows for a safe "what-if" mode, displaying actions without performing them, and the silent @Force variable offers the ability to abort rebuilds when necessary.