SQL Server: Maintenance Plans

Module 5: Other Tasks in Maintenance Plans

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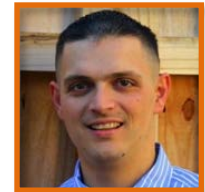
Introduction

- Some of the Maintenance Plan tasks should not be used in regular maintenance or only apply to certain scenarios

- Other less common Maintenance Plan tasks cannot be configured in the Maintenance Plan Wizard and are only available through the designer or in SSIS packages

- In this module we'll cover:
    - Shrink Database Task
    - Execute SQL Server Agent Job Task
    - Execute T-SQL Statement Task
    - Notify Operator Task

Shrink Database Task

- **One of the most misused and misunderstood tasks available in Maintenance Plans**
    - Regular shrink operations should never be performed
- **Shrink Database Task problems:**
    - It is necessary for database files to have free space to allow for growth
    - Shrinking a database moves pages at the end of the data file into free space at the beginning of the data file causing excessive index fragmentation
    - The Shrink Database Task is commonly configured in the task order after a Rebuild Index Task, negating the effects of the Rebuild Index Task
- **Shrinking a database as a one-time task to reclaim space that will never be reused by the database is not a problem but should be followed by an index <u>reorganize</u> or rebuild for the database to remove fragmentation**
    - However, this should NEVER be scheduled as a recurring task

Execute SQL Server Agent Job Task

- **Allows the execution of a single SQL Server Agent Job as a part of Database Maintenance**
- **Example of SQL Server Agent Jobs that might be included in a Database Maintenance Plan**
  - Extract data from SQL Server for archiving
  - Transfer files across the network
  - Execute a SSIS Package
  - Execute a PowerShell script
  - Start a SQL Trace or Extended Events session

Execute T-SQL Statement Task

- **Not available in the Maintenance Plan Wizard, but can be used in the Maintenance Plan Designer or SSIS Packages**

- **Provides added flexibility to Database Maintenance Plans by allowing the execution of a Transact-SQL statement as a part of Database Maintenance**

- **Does not allow configuration for a specific database, but custom coding can overcome this challenge**

- **Examples that might be included in a Database Maintenance Plan**
  - Switching partitions for a table
  - Breaking down DBCC CHECKDB into individual tasks against a VLDB
  - Changing synonyms to point to different objects

Notify Operator Task

- **Only applies to the plan level when reporting is configured in the Maintenance Plan Wizard**

- **Allows a text report to be emailed to specific operator of the success, failure, or completion of a Maintenance Plan**
  - Failed steps may be buried within the report at the plan level so it is critical that the entire report be reviewed to identify if a task failed

- **May be configured per task in the Maintenance Plan Designer or SSIS Packages**
  - A compelling reason to design or modify Maintenance Plans using the Designer instead of the Wizard
  - Allows notifying multiple operators which can leverage their configured schedules

Summary

- **The Shrink Database Task should only be used as a one time execution where space would never be reused by a database**
  - Consider using individual file shrinks manually instead
- **The Execute T-SQL Statement Task and Notify Operator Tasks cannot be individually configured within the Maintenance Plan Wizard but can be customized and added within the designer and SSIS packages**

- **The next module will look at:**
  - Creating Maintenance Plans