What uses TempDB?

Common Uses of TempDB in SQL Server

TempDB in SQL Server is a globally available temporary storage area used by the SQL Server Database Engine for various purposes. Here's a list of the most common uses of TempDB:

- **User Objects**: Includes user-defined temporary tables and temporary stored procedures. Used to temporarily hold data for processing within a session.
- **Internal Objects**: Created by SQL Server for its internal operations, including:
    - Work Tables: For cursor or spool operations and storing intermediate results.
    - Work Files: Utilized for operations like GROUP BY, ORDER BY, and hash joins.
- **Version Stores**: Holds the versions of modified data for row versioning and online index operations.
- **Temporary Large Object (LOB) Storage**: For LOB data types manipulation when it can't be done in memory.
- **Hash Sort Operations**: During query execution for storing and sorting data.
- **Service Broker**: Used to store messages and other information for asynchronous processing.
- **Query Store**: Temporarily captures transient query execution statistics and plans.
- **DBCC CHECKDB**: For storing and sorting interim results during database integrity checks.
- **Snapshot Isolation**: Versioned rows are stored in TempDB when snapshot isolation is enabled.
- **MARS (Multiple Active Result Sets)**: Uses TempDB to store session state.

Understanding what's using your TempDB and how it's being utilized can be crucial for performance tuning and ensuring the smooth operation of your SQL Server. Always monitor and maintain your TempDB as part of your regular database administration tasks to prevent any potential issues related to its growth or contention.

More information on what is using your TempDB here: https://databasehealth.com/server-overview/tempdb-use-by-hour-by-day-historic/.

Steve Stedman
Freelance SQL Server Consultant
https://stevestedman.com