Managing Storage for System Databases – TempDB

1. Plan storage for system databases

- Identify high-performance storage for tempdb, separate from OS and user DBs—for example, dedicated SSD/NVMe drives.
- Choose appropriate drives for master, msdb, and model databases to avoid I/O contention, ideally separate from tempdb and user DBs.
- Estimate initial file sizes based on workload; preallocate space to avoid frequent autogrowth.

2. Check current file locations and sizes

- Run this to list system DB files and paths:

```
SELECT name, physical_name, size*8/1024 AS SizeMB
FROM sys.master_files
WHERE database_id IN (1,2,3,4);
```

- Note sizes and growth settings for reference.

3. Move system database, in this case tempDb files (if needed)

- For msdb and model:
    1. Use ALTER DATABASE to modify file paths:

```
ALTER DATABASE tempdb
MODIFY FILE (NAME = templog, FILENAME = 'C:\Temp_Db_Log\tempdb.ldf');
```

    2. Stop SQL Server, move the physical files to the new location, then start SQL Server again.
- For tempdb:
    1. Use ALTER DATABASE tempdb MODIFY FILE to point data and log files to new locations.
    2. Restart SQL Server to recreate files at new locations.