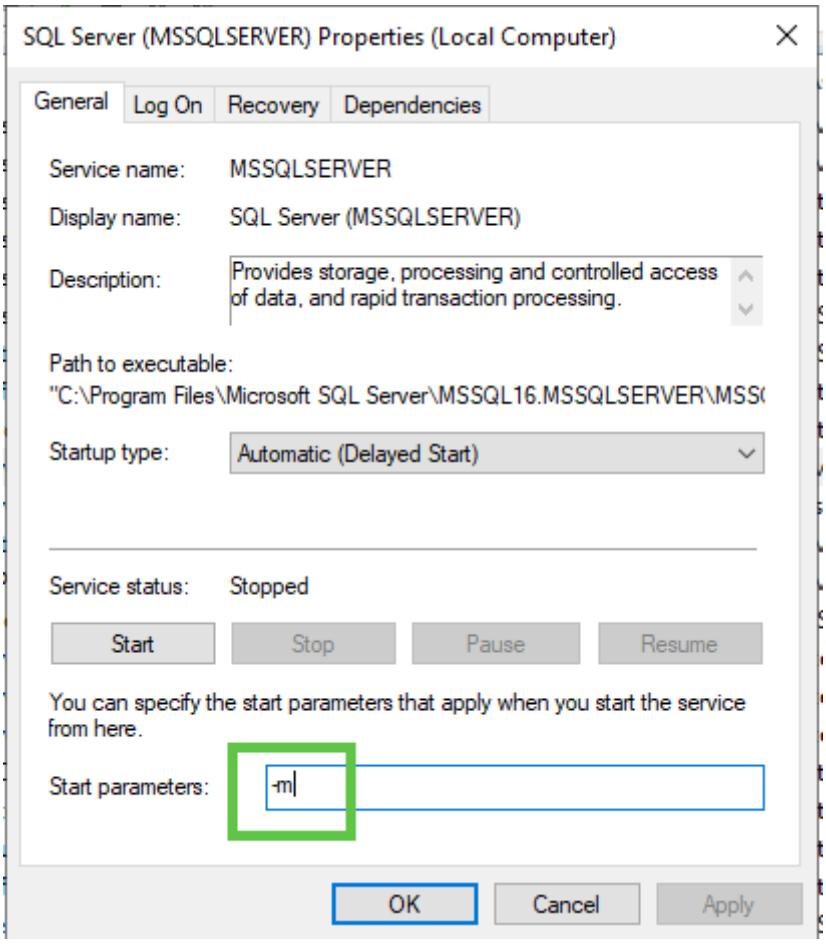
MsSQL - Restore Master/Model/MSDB

Steps to Restore the `master` Database:

- **Stop the SQL Server Instance:**
  - Open SQL Server Configuration Manager or Windows Services.
  - Locate the SQL Server service (e.g., `SQL Server (MSSQLSERVER)` for a default instance).
  - Stop the service.

- **Start SQL Server in Single-User Mode:**
  - Open the SQL Server service properties (e.g., by double-clicking the service in Services).
  - Go to the "Startup Parameters" tab.
  - Add `-m` (for single-user mode) to the existing startup parameters. If there are existing parameters, separate them with a semicolon.
  - Start the SQL Server service from there



- Connect using `sqlcmd`:
  - Open a new Command Prompt window as Administrator.
  - Navigate to the SQL Server Binn directory (e.g., `C:\Program Files\Microsoft SQL Server\MSSQLXX.MSSQLSERVER\MSSQL\Binn`).
  - Connect to the SQL Server instance using `sqlcmd` in single-user mode. For a default instance, use:

```
sqlcmd -S . -E -d master
sqlcmd -S . -U sa -P PASSWORD -d master
```

For a named instance, replace `.` with `.\<InstanceName>`

- Restore the `master` Database:
  - In the `sqlcmd` prompt, execute the following `RESTORE DATABASE` command, replacing `<path_to_backup_file>` with the actual path to your `master` database backup file:

```
RESTORE DATABASE master FROM DISK = '\\BACKUP-SERVER\Backups\SQLSERVER01\master\FULL\SQLSERVER01_master_FULL_20250910_010011.bak' WITH REPLACE, RECOVERY;
```

```
-- SQL Server shuts down after master is restored. Remove -m, start the service normally,
-- reconnect with sqlcmd, stop SQL Server Agent, then restore model and msdb:
RESTORE DATABASE model FROM DISK = '\\BACKUP-SERVER\Backups\SQLSERVER01\model\FULL\SQLSERVER01_model_FULL_20250910_010013.bak' WITH REPLACE, RECOVERY;
RESTORE DATABASE msdb FROM DISK = '\\BACKUP-SERVER\Backups\SQLSERVER01\msdb\FULL\SQLSERVER01_msdb_FULL_20250910_010014.bak' WITH REPLACE, RECOVERY;
```

Check integrity

```
DBCC CHECKDB ('master') WITH ALL_ERRORMSGS, EXTENDED_LOGICAL_CHECKS;
```

- The `WITH REPLACE` option is crucial as it overwrites the existing `master` database.
- The `RECOVERY` option brings the database online after the restore.
- **Restart SQL Server in Normal Mode:**
  - After the restore completes and `sqlcmd` indicates the instance is shutting down, stop the SQL Server service again.
  - Remove the `-m` startup parameter from the SQL Server service properties.
  - Start the SQL Server service normally.
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Last verified: October 2026

Sources:

- https://learn.microsoft.com/en-us/sql/relational-databases/backup-restore/restore-the-master-database-transact-sql
- https://learn.microsoft.com/en-us/sql/relational-databases/backup-restore/back-up-and-restore-of-system-databases-sql-server

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