

# Taming the Transaction Log



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# Quote

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- *The harder I work, the luckier I get.*

- *Samuel Goldwyn*

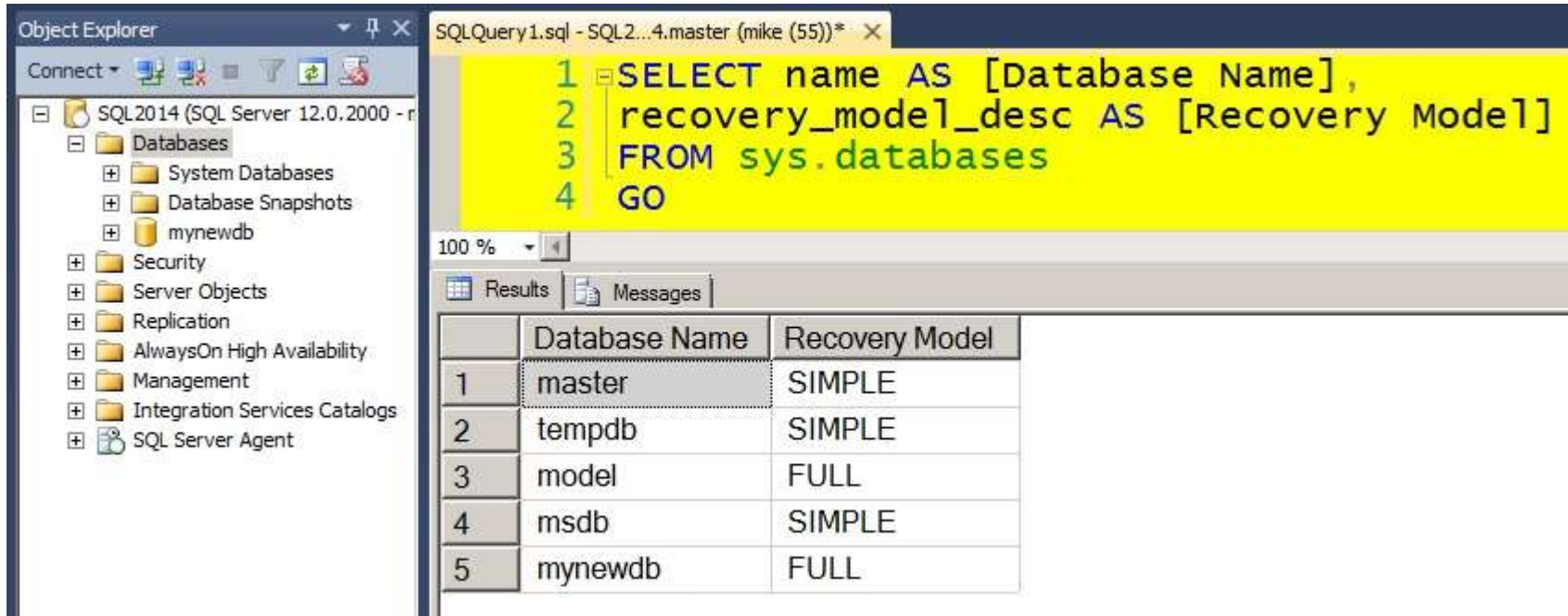
# About Me: Mike Hays

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- Since 2000, I have been working with SQL Server.
- I also worked with Oracle, DB2, Informix, MongoDB, & Teradata databases.
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- Blog:



# Query Recover Model



The screenshot displays the SQL Server Enterprise Manager interface. On the left, the Object Explorer shows the server hierarchy for 'SQL2014 (SQL Server 12.0.2000 - r)'. The 'Databases' folder is expanded, showing 'System Databases', 'Database Snapshots', and 'mynewdb'. The main window shows a SQL query window titled 'SQLQuery1.sql - SQL2...4.master (mike (55))\*'. The query is highlighted in yellow and reads:

```
1 SELECT name AS [Database Name],  
2 recovery_model_desc AS [Recovery Model]  
3 FROM sys.databases  
4 GO
```

Below the query, the 'Results' tab is active, displaying a table with the following data:

	Database Name	Recovery Model
1	master	SIMPLE
2	tempdb	SIMPLE
3	model	FULL
4	msdb	SIMPLE
5	mynewdb	FULL

# Log Space Used %

```
1  --
2  DBCC SQLPERF(logspace);
3  GO
4  --
```

100 %

Results Messages

	Database Name	Log Size (MB)	Log Space Used (%)	Status
1	master	1.992188	35.31863	0
2	tempdb	0.7421875	69.60526	0
3	model	0.7421875	47.69737	0
4	msdb	0.7421875	63.15789	0
5	mynewdb	0.5390625	56.79348	0

# Best Practice to Shrink the Log File

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1. ALTER DATABASE [mydatabase] SET RECOVERY SIMPLE;
2. DBCC SHRINKFILE(<log\_file\_name\_Log>,1);
3. ALTER DATABASE [mydatabase] SET RECOVERY FULL;
4. BACKUP DATABASE [mydatabase] ....

# If the Log will not shrink

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- If the log file does not shrink

Query:

```
sys.dm_tran_database_transactions
```

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```
BACKUP LOG [AdventureWorks2014]
TO DISK='C:\AdventureWorks2014_01.trn' ,
    DISK='C:\AdventureWorks2014_02.trn' ,
    DISK='C:\AdventureWorks2014_03.trn' ,
    DISK='C:\AdventureWorks2014_04.trn'
WITH STATS = 10 GO
```



# Read Error Log in the Query Window

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the server instance '192.168.37.164 (SQL Server 12.0.1)'. The Query Window on the right shows the execution of the stored procedure `sp_readerrorlog`. The results pane displays the following output:

```
2016-04-17 08:31:48.890 spid11s Clearing tempdb database.
2016-04-17 08:31:52.950 spid11s Starting up database 'tempdb'.
2016-04-17 08:31:56.240 spid20s The Service Broker endpoint is in disabled or
2016-04-17 08:31:56.240 spid20s The Database Mirroring endpoint is in disable
2016-04-17 08:31:58.560 spid20s Service Broker manager has started.
2016-04-17 08:32:00.560 spid8s Recovery is complete. This is an informationa
2016-04-17 08:32:03.440 Server Common language runtime (CLR) functionality i
2016-04-17 08:32:05.680 spid51 Attempting to load library 'xpsqlbot.dll' int
2016-04-17 08:32:05.720 spid51 Using 'xpsqlbot.dll' version '2014.120.2000'
2016-04-17 08:32:06.100 spid51 Attempting to load library 'xpstar.dll' into
2016-04-17 08:32:06.130 spid51 Using 'xpstar.dll' version '2014.120.2000' to
2016-04-17 08:32:26.390 Server Software Usage Metrics is enabled.
2016-04-17 08:36:00.040 Logon Error: 18456, Severity: 14, State: 8.
2016-04-17 08:36:00.040 Logon Login failed for user 'mike'. Reason: Passwor
```

(60 row(s) affected)

The status bar at the bottom indicates: Query executed successfully. | 192.168.37.164 (12.0 RTM) | mike (56) | master | 00:00:00 | 60 rows

# Recommendation

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- Ola Hallengren
- <https://ola.hallengren.com/sql-server-backup.html>
- FREE

# Questions



*& Thank You*

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