Contents

Why?

Why is the Transaction Log double the size of the data file with issuing a SELECT INTO statement?

What is the Transaction Log recording?

Research:

What is a Transaction Log?

http://www.sqlshack.com/reading-sql-server-transaction-log/

Different Recovery Models

FULL recovery model

This recovery model logs every change to every row as well as a copy of each page added to indexes or table. As such the log contains enough information to be able to completely re- construct every action which occurred on the database, allowing you to restore your database back to any specific time, provided that you have a full log chain. All entries are kept in the online transaction log until the log is backed up, after which only active transactions will remain in the online log. This means that in order to get information about completed transactions from the log, the log backups will have to be taken into account.

BULK_LOGGED recovery model

When you are using the BULK_LOGGED recovery option, all minimally logged operations are not written to the Log. Minimally logged operations are operations such as SELECT INTO, BULK INSERT and Index operations. Essentially just enough information is logged to be able to undo the transaction, but not enough to redo it. The log is handled in much the same way as the FULL recovery model, and inactive transactions are moved to the log backup when a log backup is taken. Of course no information about bulk transactions are available.

SIMPLE recovery model

The SIMPLE recovery model only logs enough information to allow you to recover your database. All inactive log entries are automatically truncated when a checkpoint occurs. All operations are still being logged, but as soon as a checkpoint occurs the log is automatically truncated, which means that it becomes available for re-use and older log entries can now be over-written.

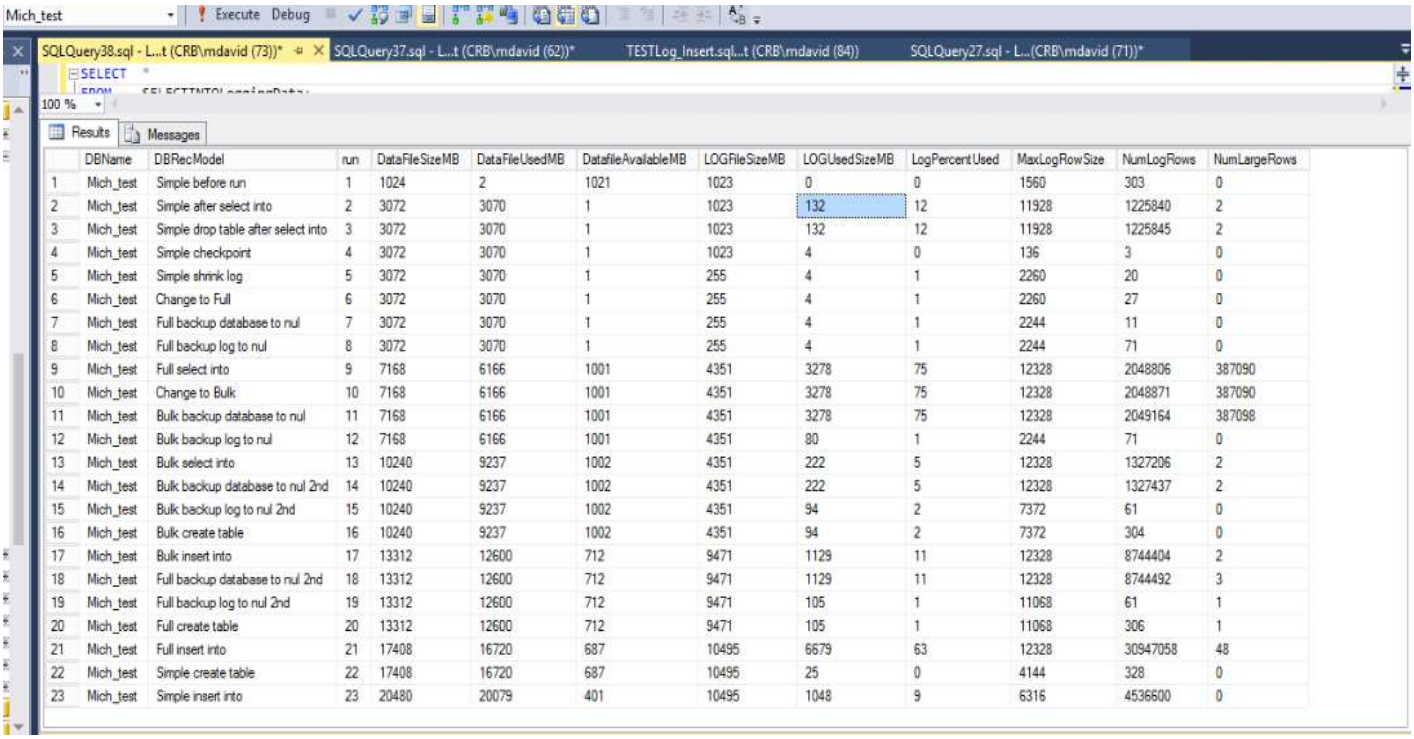
What is logged in the transaction log?

…Every action performed on SQL Server is logged in the SQL Server transaction log, multiple entries may be created for a transaction as well as all locks that were taken during the operation. … Enough information is written to the log to allow for a transaction to be either re-done (rolled forward) or undone (rolled back).

Create a Test for each Recovery Model when issuing the "Select Into" statement

I created a new database and a script to run the "Select Into" statement and log the data file, log file, and log file rows information before and after each run. The entire script can be seen in Appendix A.

The results of each run are in the picture below:



DBName	DBRecModel	run	DataFileSizeMB	DataFileUsedMB	DatafileAvailableMB	LOGFileSizeMB	LOGUsedSizeMB	LogPercentUsed	MaxLogRowSize	NumLogRows	NumLargeRows
1 Mich_test	Simple before run	1	1024	2	1021	1023	0	0	1560	303	0
2 Mich_test	Simple after select into	2	3072	3070	1	1023	132	12	11928	1225840	2
3 Mich_test	Simple drop table after select into	3	3072	3070	1	1023	132	12	11928	1225845	2
4 Mich_test	Simple checkpoint	4	3072	3070	1	1023	4	0	136	3	0
5 Mich_test	Simple shrink log	5	3072	3070	1	255	4	1	2260	20	0
6 Mich_test	Change to Full	6	3072	3070	1	255	4	1	2260	27	0
7 Mich_test	Full backup database to nul	7	3072	3070	1	255	4	1	2244	11	0
8 Mich_test	Full backup log to nul	8	3072	3070	1	255	4	1	2244	71	0
9 Mich_test	Full select into	9	7168	6166	1001	4351	3278	75	12328	2048806	387090
10 Mich_test	Change to Bulk	10	7168	6166	1001	4351	3278	75	12328	2048871	387090
11 Mich_test	Bulk backup database to nul	11	7168	6166	1001	4351	3278	75	12328	2049164	387098
12 Mich_test	Bulk backup log to nul	12	7168	6166	1001	4351	80	1	2244	71	0
13 Mich_test	Bulk select into	13	10240	9237	1002	4351	222	5	12328	1327206	2
14 Mich_test	Bulk backup database to nul 2nd	14	10240	9237	1002	4351	222	5	12328	1327437	2
15 Mich_test	Bulk backup log to nul 2nd	15	10240	9237	1002	4351	94	2	7372	61	0
16 Mich_test	Bulk create table	16	10240	9237	1002	4351	94	2	7372	304	0
17 Mich_test	Bulk insert into	17	13312	12600	712	9471	1129	11	12328	8744404	2
18 Mich_test	Full backup database to nul 2nd	18	13312	12600	712	9471	1129	11	12328	8744492	3
19 Mich_test	Full backup log to nul 2nd	19	13312	12600	712	9471	105	1	11068	61	1
20 Mich_test	Full create table	20	13312	12600	712	9471	105	1	11068	306	1
21 Mich_test	Full insert into	21	17408	16720	687	10495	6679	63	12328	30947058	48
22 Mich_test	Simple create table	22	17408	16720	687	10495	25	0	4144	328	0
23 Mich_test	Simple insert into	23	20480	20079	401	10495	1048	9	6316	4536600	0

Notice the transaction log before the select into for the simple model is a size of zero MB. When the Select into is ran, the transaction log increases by 1,225,840 rows which are 132MB total. The simple model is minimal logging; the definition does not say no logging.

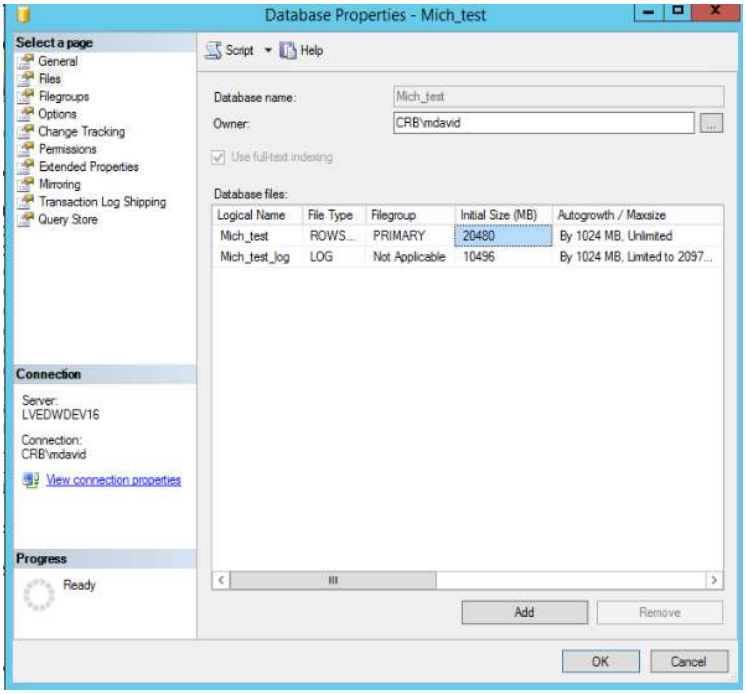
Type of Recovery Model	Log File size after transaction (MB)	Log file in use after Transaction (MB)	Max Log Row size after transaction	Number of log rows after transaction	Number of large rows after transaction
Simple	1023	132	11928	1225840	2
Full	4351	3278	12328	2048806	387090
Bulk-Logged	4351	222	12328	1327437	2

When the Full recovery model is used and the select into statement is run, the transaction log increases by 3274MB. The log size is 24 times bigger than the simple recovery model. The actual log size on the disk increased from 255MB to 4,351MB. Why? Because auto growth is enabled and set to grow in VLFs of 1,024MB extents.

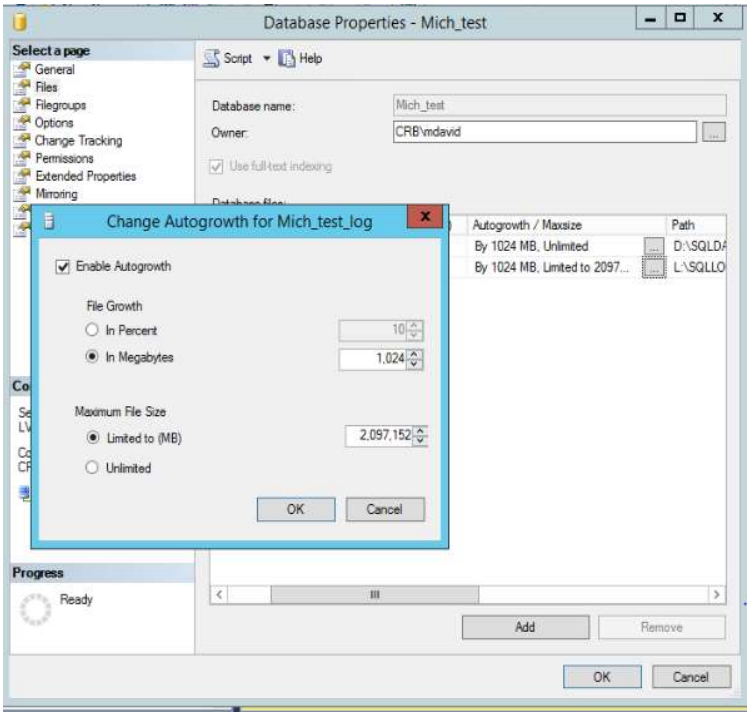
Let's see a how the log increased in a visual:

Steps	Total Log File Size MB	Actual Used space MB	Percent used
Log size at start	255	4	1
Full model select into ran – extent (VLF) 1 – add 1024MB	1279	Needs 3278. Grow log	
Full model select into ran – extent (VLF) 1– add 1024MB	2303	Needs 3278. Grow again.	
Full model select into ran – extent (VLF) 1– add 1024MB	3327	Needs 3278. Needs 51MB more.	
Full model select into ran – extent (VLF) 1– add 1024MB	4351	3278	75
Ending	4351	3278	75

In the next picture notice the Initial Log size, the value was set to 1023MB at the creation of the database. As the log file grew, so did the initial log size value.



Looking at the autogrowth setting for the log file, notice the log is set to autogrow in 1024MB extents until it reaches the maximum file size 2,097,152MB (which is the entire size of the disk in which the log file is written).



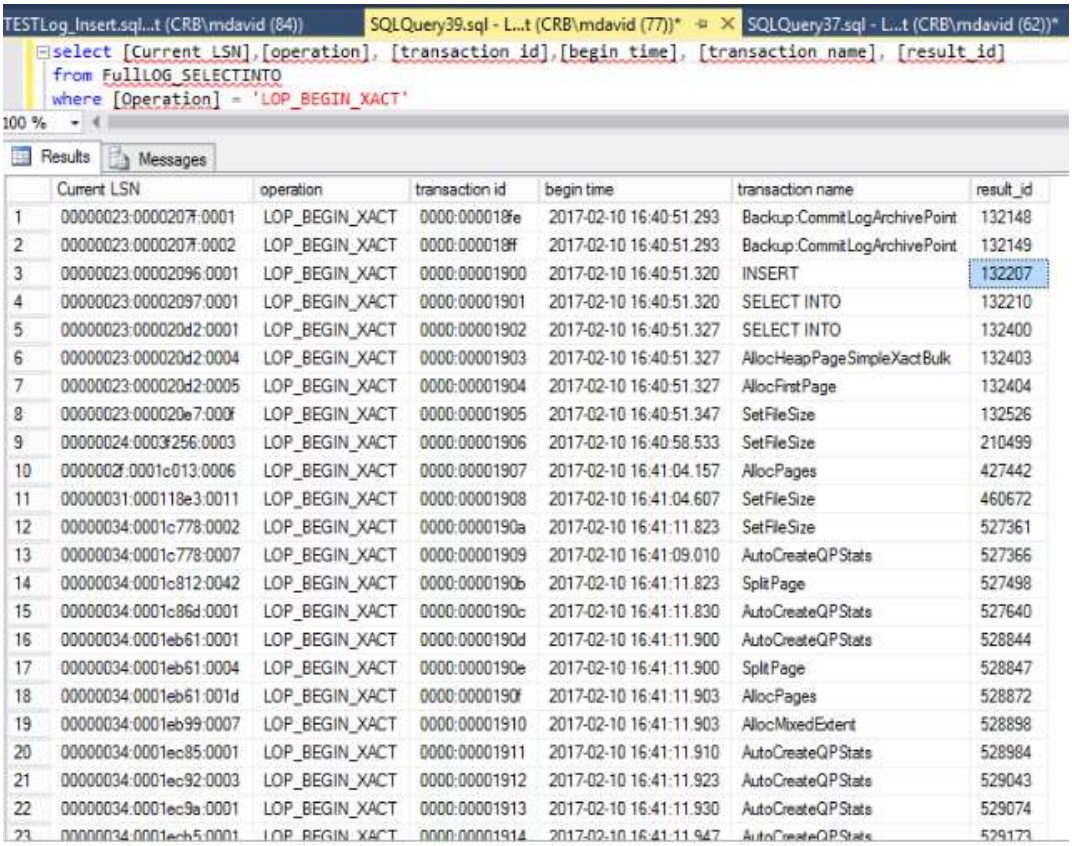
Now let's find out what is in the transaction log after the select into statement is run with a Full recovery model. After the select into statement, the script took a snapshot of the transaction log and inserted the data into a table. See code below:

```
/* Full select into*/
SELECT  *
INTO    Mich_test.dbo.Fact_Auto_Call_Activity_Full
FROM    AUTO_EDW.[dbo].[Fact_Auto_Call_Activity]; --(8245026 row(s) affected)

CREATE table FullLOG_SELECTINTO(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),[Begin Time] datetime, [Transaction Name]
varchar(100), [Transaction SID] varchar(100));

INSERT  INTO FullLOG_SELECTINTO([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],[Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
      [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
```

There are 971,909 rows in the snapshot of the log table. Notice there are 132,207 rows in the transaction log before the first statement is written to the log. The log is recording the allocation of buffer memory before the Insert statement.



TESTLog_Insert.sql...t (CRB\mdavid (84)) | SQLQuery39.sql - L...t (CRB\mdavid (77))* | SQLQuery37.sql - L...t (CRB\mdavid (62))*

```
select [Current LSN],[operation], [transaction id],[begin time], [transaction name], [result_id]
from FullLOG_SELECTINTO
where [Operation] = 'LOP_BEGIN_XACT'
```

100 %

Results | Messages

	Current LSN	operation	transaction id	begin time	transaction name	result_id
1	00000023:0000207f:0001	LOP_BEGIN_XACT	0000:000018fe	2017-02-10 16:40:51.293	Backup:CommitLogArchivePoint	132148
2	00000023:0000207f:0002	LOP_BEGIN_XACT	0000:000018ff	2017-02-10 16:40:51.293	Backup:CommitLogArchivePoint	132149
3	00000023:00002096:0001	LOP_BEGIN_XACT	0000:00001900	2017-02-10 16:40:51.320	INSERT	132207
4	00000023:00002097:0001	LOP_BEGIN_XACT	0000:00001901	2017-02-10 16:40:51.320	SELECT INTO	132210
5	00000023:000020d2:0001	LOP_BEGIN_XACT	0000:00001902	2017-02-10 16:40:51.327	SELECT INTO	132400
6	00000023:000020d2:0004	LOP_BEGIN_XACT	0000:00001903	2017-02-10 16:40:51.327	AllocHeapPageSimpleXactBulk	132403
7	00000023:000020d2:0005	LOP_BEGIN_XACT	0000:00001904	2017-02-10 16:40:51.327	AllocFirstPage	132404
8	00000023:000020e7:000f	LOP_BEGIN_XACT	0000:00001905	2017-02-10 16:40:51.347	SetFileSize	132526
9	00000024:0003f256:0003	LOP_BEGIN_XACT	0000:00001906	2017-02-10 16:40:58.533	SetFileSize	210499
10	0000002f:0001c013:0006	LOP_BEGIN_XACT	0000:00001907	2017-02-10 16:41:04.157	AllocPages	427442
11	00000031:000118e3:0011	LOP_BEGIN_XACT	0000:00001908	2017-02-10 16:41:04.607	SetFileSize	460672
12	00000034:0001c778:0002	LOP_BEGIN_XACT	0000:0000190a	2017-02-10 16:41:11.823	SetFileSize	527361
13	00000034:0001c778:0007	LOP_BEGIN_XACT	0000:00001909	2017-02-10 16:41:09.010	AutoCreateQPStats	527366
14	00000034:0001c812:0042	LOP_BEGIN_XACT	0000:0000190b	2017-02-10 16:41:11.823	SplitPage	527498
15	00000034:0001c86d:0001	LOP_BEGIN_XACT	0000:0000190c	2017-02-10 16:41:11.830	AutoCreateQPStats	527640
16	00000034:0001eb61:0001	LOP_BEGIN_XACT	0000:0000190d	2017-02-10 16:41:11.900	AutoCreateQPStats	528844
17	00000034:0001eb61:0004	LOP_BEGIN_XACT	0000:0000190e	2017-02-10 16:41:11.900	SplitPage	528847
18	00000034:0001eb61:001d	LOP_BEGIN_XACT	0000:0000190f	2017-02-10 16:41:11.903	AllocPages	528872
19	00000034:0001eb99:0007	LOP_BEGIN_XACT	0000:00001910	2017-02-10 16:41:11.903	AllocMixedExtent	528898
20	00000034:0001ec85:0001	LOP_BEGIN_XACT	0000:00001911	2017-02-10 16:41:11.910	AutoCreateQPStats	528984
21	00000034:0001ec92:0003	LOP_BEGIN_XACT	0000:00001912	2017-02-10 16:41:11.923	AutoCreateQPStats	529043
22	00000034:0001ec9a:0001	LOP_BEGIN_XACT	0000:00001913	2017-02-10 16:41:11.930	AutoCreateQPStats	529074
23	00000034:0001ecb5:0001	LOP_BEGIN_XACT	0000:00001914	2017-02-10 16:41:11.947	AutoCreateQPStats	529173

Remember, this snapshot is from a Full recovery model. If we were in simple, the log would not be as large. The Select Into statement is made of the following in the log. Let's query the beginning of each statement issued. In this document I will not get into page splits and memory locks, just know that there is way more going on in memory, and being recorded in the transaction log, then just an insert into a table.

INSERT

SELECT INTO

SELECT INTO

AllocHeapPageSimpleXactBulk

AllocFirstPage

SetFileSize

SetFileSize

AllocPages

SetFileSize

SetFileSize

AutoCreateQPStats

SplitPage

AutoCreateQPStats

AutoCreateQPStats

SplitPage

AllocPages

AllocMixedExtent

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

BTreeMgr::SplitRoo

AllocPages

SplitPage

AutoCreateQPStats

AllocPages

SplitPage

AutoCreateQPStats

AutoCreateQPStats

AutoCreateQPStats

SetFileSize

CREATE TABLE

SplitPage

SetFileSize

Notice the entire process that happens is written to the transaction log including all memory transactions, locks, latches, page splits, dirty pages, and any data changes.

Summary:

The transaction log quadruples in size when running a “select into” with Full Recovery Model, because not only the data changes are recorded. Every memory change, lock, latch, split pages, etc. is recorded in the log.

Appendix A

```
--2016 database simple
--Want to test Simple, Full, Bulk Logged
-- select into and insert with select
--looking at the growth of the log file in a new database.

/*Here's what I did: I created  a table called SELECTINTOLoggingData to hold the results
of calling fn_dblog.
 the following information was captured:
•Max log record size
•Sum of log record sizes
•Number of log records
•Number of log records larger than 8K
*/

USE MICH_test;

IF EXISTS ( SELECT  1
            FROM    sys.tables
            WHERE   name = 'SELECTINTOLoggingData' )
    DROP TABLE SELECTINTOLoggingData;
GO

CREATE TABLE SELECTINTOLoggingData
    ( DBName varchar(200),
      DBRecModel VARCHAR(100) , run int,
         DataFileSizeMB int,
         DataFileUsedMB int,
         DatafileAvailableMB int,
         LOGFileSizeMB int,
         LOGUsedSizeMB int,
         LogPercentUsed int,
      MaxLogRowSize INT ,
      NumLogRows INT ,
      NumLargeRows INT
    );
GO

/* was going to use this query for rows, but then added Data and log file size info */
--INSERT  INTO SELECTINTOLoggingData(DBRecModel,MaxLogRowSize,NumLogRows,NumLargeRows)
--        SELECT  'Simple before run' DBRecModel,
--                MAX([Log Record Length]) MaxLogRowSize ,
--                COUNT(*) NumLogRows,
--                ( SELECT    COUNT(*)
--                  FROM      fn_dblog(NULL, NULL)
--                  WHERE     [Log Record Length] > 8000
--                ) as NumLargeRows
--        FROM    fn_dblog(NULL, NULL);
--GO


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
```

```
        DataFileUsedMB ,
        DatafileAvailableMB ,
        LOGFileSizeMB ,
        LOGUsedSizeMB ,
        LogPercentUsed,
     MaxLogRowSize ,
     NumLogRows ,
     NumLargeRows
   )
SELECT c.DBName ,
       'Simple before run' AS DBRecModel , 1,
       c.[DataFile Size(MB)] ,
       c.[DataFile UsedSpace(MB)] ,
       c.[DataFile AvailableFreeSpace(MB)] ,
       c.LOG_FILEMB ,
       c.LOG_USED_SIZEMB ,
       c.[Percent Log Used] ,
       a.MaxLogRowSize ,
       a.NumLogRows ,
       a.NumLargeRows
FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                DB_NAME() AS DBName ,
                MAX([Log Record Length]) MaxLogRowSize ,
                COUNT(*) NumLogRows ,
                ( SELECT    COUNT(*)
                  FROM      fn_dblog(NULL, NULL)
                  WHERE     [Log Record Length] > 8000
                ) AS NumLargeRows
         FROM      fn_dblog(NULL, NULL)
       ) a
       INNER JOIN ( SELECT DBName ,
  --     name ,
    --   [filename] ,
                           Size AS 'DataFile Size(MB)' ,
                           UsedSpace AS 'DataFile UsedSpace(MB)' ,
                           ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                           b.LOG_FILEMB ,
                           b.LOG_USED_SIZEMB ,
                           b.[Percent Log Used]
                    FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                       s.name AS [Name] ,
                                       s.physical_name AS [FileName] ,
                                       ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                       ( CAST(CASE s.type
                                                WHEN 2 THEN 0
                                                ELSE CAST(FILEPROPERTY(s.name,
                                                          'SpaceUsed') AS FLOAT)
                                                     * CONVERT(FLOAT, 8)
                                              END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                       s.file_id AS [ID]
                             FROM      sys.filegroups AS g
                                       INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                             OR s.type = 0
                                                                             )
                                                                             AND s.database_id = DB_ID()
                                                                             AND ( s.drop_lsn IS NULL )
                                                                             )
```

```
                                                    AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;


/*Want to see the actual log steps--this is baseline*/

CREATE table SimpleLOG_Base(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
       [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));

INSERT  INTO SimpleLOG_Base([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction
```

```
/* Simple run select into from AUTO_EDW.FACT_AUTO_CALL_ACTIVITY 3,209.031MB data size,
301.344 MB index size, 8245026 rows */


SELECT  *
INTO    Mich_test.dbo.Fact_Auto_Call_Activity_Simple
FROM    AUTO_EDW.[dbo].[Fact_Auto_Call_Activity]; --(8245026 row(s) affected)

CREATE table SIMPLELOG_SELECTINTO(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
      [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));

INSERT  INTO SIMPLELOG_SELECTINTO([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
      [Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
      [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Simple after select into' AS DBRecModel , 2,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
```

```
   --     name ,
     --   [filename] ,
                        Size AS 'DataFile Size(MB)' ,
                        UsedSpace AS 'DataFile UsedSpace(MB)' ,
                        ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                        b.LOG_FILEMB ,
                        b.LOG_USED_SIZEMB ,
                        b.[Percent Log Used]
                FROM    ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                    s.name AS [Name] ,
                                    s.physical_name AS [FileName] ,
                                    ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                    ( CAST(CASE s.type
                                             WHEN 2 THEN 0
                                             ELSE CAST(FILEPROPERTY(s.name,
                                                         'SpaceUsed') AS FLOAT)
                                                  * CONVERT(FLOAT, 8)
                                           END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                    s.file_id AS [ID]
                          FROM      sys.filegroups AS g
                                    INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                          OR s.type = 0
                                                                          )
                                                                          AND s.database_id = DB_ID()
                                                                          AND ( s.drop_lsn IS NULL )
                                                                          )
                                                                          AND ( s.data_space_id =
g.data_space_id )
                        ) DBFileSizeInfo
                        INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                            ( ( [Data File(s) Size (KB)] )
                                              / 1024 ) AS Data_FileMB ,
                                            ( [LOG File(s) Size (KB)]
                                              / 1024 ) AS LOG_FILEMB ,
                                            ( [Log File(s) Used Size (KB)]
                                              / 1024 ) AS LOG_USED_SIZEMB ,
                                            [Percent Log Used]
                                     FROM   ( SELECT    *
                                              FROM
sys.dm_os_performance_counters
                                              WHERE     counter_name IN (
                                                        'Data File(s) Size (KB)',
                                                        'Log File(s) Size (KB)',
                                                        'Log File(s) Used Size (KB)',
                                                        'Percent Log Used' )
                                                        AND instance_name != '_Total'
                                                        AND instance_name =
'Mich_test'
                                            ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                ) c ON a.DBName = c.DBName;

SELECT  *
```

```
FROM    SELECTINTOLoggingData;

/*Drop table, change to FULL, select into again*/
 Drop table Mich_test.dbo.Fact_Auto_Call_Activity;

-- alter table SELECTINTOLoggingData add run int;

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Simple drop table after select into' AS DBRecModel , 3,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                           'SpaceUsed') AS FLOAT)
```

```
                                        * CONVERT(FLOAT, 8)
                                    END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                s.file_id AS [ID]
                        FROM    sys.filegroups AS g
                                INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                              OR s.type = 0
                                                              )
                                                              AND s.database_id = DB_ID()
                                                              AND ( s.drop_lsn IS NULL )
                                                              )
                                                              AND ( s.data_space_id =
g.data_space_id )
                      ) DBFileSizeInfo
                      INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                          ( ( [Data File(s) Size (KB)] )
                                            / 1024 ) AS Data_FileMB ,
                                          ( [LOG File(s) Size (KB)]
                                            / 1024 ) AS LOG_FILEMB ,
                                          ( [Log File(s) Used Size (KB)]
                                            / 1024 ) AS LOG_USED_SIZEMB ,
                                          [Percent Log Used]
                                   FROM   ( SELECT    *
                                            FROM
sys.dm_os_performance_counters
                                            WHERE     counter_name IN (
                                                      'Data File(s) Size (KB)',
                                                      'Log File(s) Size (KB)',
                                                      'Log File(s) Used Size (KB)',
                                                      'Percent Log Used' )
                                                      AND instance_name != '_Total'
                                                      AND instance_name =
'Mich_test'
                                          ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/*Clean Log file*/
checkpoint;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
```

```
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Simple checkpoint' AS DBRecModel , 4,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
           FROM      fn_dblog(NULL, NULL)
         ) a
         INNER JOIN ( SELECT DBName ,
    --     name ,
      --   [filename] ,
                             Size AS 'DataFile Size(MB)' ,
                             UsedSpace AS 'DataFile UsedSpace(MB)' ,
                             ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                             b.LOG_FILEMB ,
                             b.LOG_USED_SIZEMB ,
                             b.[Percent Log Used]
                      FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                         s.name AS [Name] ,
                                         s.physical_name AS [FileName] ,
                                         ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                         ( CAST(CASE s.type
                                                  WHEN 2 THEN 0
                                                  ELSE CAST(FILEPROPERTY(s.name,
                                                            'SpaceUsed') AS FLOAT)
                                                       * CONVERT(FLOAT, 8)
                                                END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                         s.file_id AS [ID]
                               FROM      sys.filegroups AS g
                                         INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                               OR s.type = 0
                                                                               )
                                                                               AND s.database_id = DB_ID()
                                                                               AND ( s.drop_lsn IS NULL )
                                                                               )
                                                                               AND ( s.data_space_id =
g.data_space_id )
                             ) DBFileSizeInfo
                             INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                 ( ( [Data File(s) Size (KB)] )
                                                   / 1024 ) AS Data_FileMB ,
```

```
                                        ( [LOG File(s) Size (KB)]
                                          / 1024 ) AS LOG_FILEMB ,
                                        ( [Log File(s) Used Size (KB)]
                                          / 1024 ) AS LOG_USED_SIZEMB ,
                                        [Percent Log Used]
                                FROM    ( SELECT    *
                                          FROM
sys.dm_os_performance_counters
                                          WHERE     counter_name IN (
                                                    'Data File(s) Size (KB)',
                                                    'Log File(s) Size (KB)',
                                                    'Log File(s) Used Size (KB)',
                                                    'Percent Log Used' )
                                                    AND instance_name != '_Total'
                                                    AND instance_name =
'Mich_test'
                                        ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/*DBCC*/
DBCC SHRINKFILE(Mich_test_log, 200); -- unit is set in MBs
GO


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Simple shrink log' AS DBRecModel , 5,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
```

```
                    MAX([Log Record Length]) MaxLogRowSize ,
                    COUNT(*) NumLogRows ,
                    ( SELECT    COUNT(*)
                      FROM      fn_dblog(NULL, NULL)
                      WHERE     [Log Record Length] > 8000
                    ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
    --      name ,
      --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                             'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
```

```
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/* set to full*/
ALTER DATABASE [Mich_test] SET RECOVERY FULL;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Change to Full' AS DBRecModel , 6,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                         Size AS 'DataFile Size(MB)' ,
                         UsedSpace AS 'DataFile UsedSpace(MB)' ,
                         ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                         b.LOG_FILEMB ,
                         b.LOG_USED_SIZEMB ,
                         b.[Percent Log Used]
```

```
                    FROM    ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                             'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;


/* Backup to Nul --truncate log */
Backup database [Mich_test] to disk = 'NUL:' WITH NO_COMPRESSION;
```

```
insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Full backup database to nul' AS DBRecModel , 7,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                             'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
```

```
                                                              )
                                                              AND s.database_id = DB_ID()
                                                              AND ( s.drop_lsn IS NULL )
                                                              )
                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/*truncate log*/
BACKUP LOG [Mich_test] TO DISK = 'NUL:' WITH NO_COMPRESSION;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Full backup log to nul' AS DBRecModel , 8,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
```

```
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
FROM    ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
  --      name ,
    --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                                        'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
```

```
                                                FROM
sys.dm_os_performance_counters
                                                WHERE     counter_name IN (
                                                          'Data File(s) Size (KB)',
                                                          'Log File(s) Size (KB)',
                                                          'Log File(s) Used Size (KB)',
                                                          'Percent Log Used' )
                                                          AND instance_name != '_Total'
                                                          AND instance_name =
'Mich_test'
                                              ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/* Full select into*/
SELECT  *
INTO    Mich_test.dbo.Fact_Auto_Call_Activity_Full
FROM    AUTO_EDW.[dbo].[Fact_Auto_Call_Activity]; --(8245026 row(s) affected)

CREATE table FullLOG_SELECTINTO(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
       [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));

INSERT  INTO FullLOG_SELECTINTO([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Full select into' AS DBRecModel , 9,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
```

```
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
FROM    ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
  --      name ,
    --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                                        'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
```

```
                                                FROM
sys.dm_os_performance_counters
                                                WHERE     counter_name IN (
                                                          'Data File(s) Size (KB)',
                                                          'Log File(s) Size (KB)',
                                                          'Log File(s) Used Size (KB)',
                                                          'Percent Log Used' )
                                                          AND instance_name != '_Total'
                                                          AND instance_name =
'Mich_test'
                                              ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/* set to bulk*/
ALTER DATABASE [Mich_test] SET RECOVERY BULK_LOGGED;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Change to Bulk' AS DBRecModel , 10,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
```

```
        ) a
        INNER JOIN ( SELECT DBName ,
    --      name ,
      --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                                        'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                   ) c ON a.DBName = c.DBName;
```

```
SELECT  *
FROM    SELECTINTOLoggingData;


/* Bulk Backup to Nul --truncate log */
Backup database [Mich_test] to disk = 'NUL:' WITH NO_COMPRESSION;



insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Bulk backup database to nul' AS DBRecModel , 11,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
```

```
                                                WHEN 2 THEN 0
                                                ELSE CAST(FILEPROPERTY(s.name,
                                                          'SpaceUsed') AS FLOAT)
                                                     * CONVERT(FLOAT, 8)
                                           END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                      s.file_id AS [ID]
                                FROM  sys.filegroups AS g
                                      INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                            OR s.type = 0
                                                                            )
                                                                            AND s.database_id = DB_ID()
                                                                            AND ( s.drop_lsn IS NULL )
                                                                            )
                                                                            AND ( s.data_space_id =
g.data_space_id )
                               ) DBFileSizeInfo
                               INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                   ( ( [Data File(s) Size (KB)] )
                                                     / 1024 ) AS Data_FileMB ,
                                                   ( [LOG File(s) Size (KB)]
                                                     / 1024 ) AS LOG_FILEMB ,
                                                   ( [Log File(s) Used Size (KB)]
                                                     / 1024 ) AS LOG_USED_SIZEMB ,
                                                   [Percent Log Used]
                                            FROM   ( SELECT    *
                                                     FROM
sys.dm_os_performance_counters
                                                     WHERE     counter_name IN (
                                                               'Data File(s) Size (KB)',
                                                               'Log File(s) Size (KB)',
                                                               'Log File(s) Used Size (KB)',
                                                               'Percent Log Used' )
                                                               AND instance_name != '_Total'
                                                               AND instance_name =
'Mich_test'
                                                   ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                    ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/*truncate log*/
BACKUP LOG [Mich_test] TO DISK = 'NUL:' WITH NO_COMPRESSION;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
```

```
        LOGUsedSizeMB ,
        LogPercentUsed,
     MaxLogRowSize ,
     NumLogRows ,
     NumLargeRows
   )
SELECT c.DBName ,
       'Bulk backup log to nul' AS DBRecModel , 12,
       c.[DataFile Size(MB)] ,
       c.[DataFile UsedSpace(MB)] ,
       c.[DataFile AvailableFreeSpace(MB)] ,
       c.LOG_FILEMB ,
       c.LOG_USED_SIZEMB ,
       c.[Percent Log Used] ,
       a.MaxLogRowSize ,
       a.NumLogRows ,
       a.NumLargeRows
FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                DB_NAME() AS DBName ,
                MAX([Log Record Length]) MaxLogRowSize ,
                COUNT(*) NumLogRows ,
                ( SELECT    COUNT(*)
                  FROM      fn_dblog(NULL, NULL)
                  WHERE     [Log Record Length] > 8000
                ) AS NumLargeRows
         FROM      fn_dblog(NULL, NULL)
       ) a
       INNER JOIN ( SELECT DBName ,
  --     name ,
    --   [filename] ,
                           Size AS 'DataFile Size(MB)' ,
                           UsedSpace AS 'DataFile UsedSpace(MB)' ,
                           ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                           b.LOG_FILEMB ,
                           b.LOG_USED_SIZEMB ,
                           b.[Percent Log Used]
                    FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                       s.name AS [Name] ,
                                       s.physical_name AS [FileName] ,
                                       ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                       ( CAST(CASE s.type
                                                WHEN 2 THEN 0
                                                ELSE CAST(FILEPROPERTY(s.name,
                                                          'SpaceUsed') AS FLOAT)
                                                     * CONVERT(FLOAT, 8)
                                              END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                       s.file_id AS [ID]
                             FROM      sys.filegroups AS g
                                       INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                             OR s.type = 0
                                                                             )
                                                                             AND s.database_id = DB_ID()
                                                                             AND ( s.drop_lsn IS NULL )
                                                                             )
                                                                             AND ( s.data_space_id =
g.data_space_id )
                           ) DBFileSizeInfo
```

```
                        INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                     ( ( [Data File(s) Size (KB)] )
                                       / 1024 ) AS Data_FileMB ,
                                     ( [LOG File(s) Size (KB)]
                                       / 1024 ) AS LOG_FILEMB ,
                                     ( [Log File(s) Used Size (KB)]
                                       / 1024 ) AS LOG_USED_SIZEMB ,
                                     [Percent Log Used]
                                FROM   ( SELECT    *
                                         FROM
sys.dm_os_performance_counters
                                         WHERE     counter_name IN (
                                                   'Data File(s) Size (KB)',
                                                   'Log File(s) Size (KB)',
                                                   'Log File(s) Used Size (KB)',
                                                   'Percent Log Used' )
                                                   AND instance_name != '_Total'
                                                   AND instance_name =
'Mich_test'
                                       ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/* Bulk select into*/
SELECT  *
INTO    Mich_test.dbo.Fact_Auto_Call_Activity_Bulk
FROM    AUTO_EDW.[dbo].[Fact_Auto_Call_Activity]; --(8245026 row(s) affected)

CREATE table BulkLOG_SELECTINTO(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
      [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));

INSERT  INTO BulkLOG_SELECTINTO([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
      [Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
      [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
```

```
        LOGUsedSizeMB ,
        LogPercentUsed,
     MaxLogRowSize ,
     NumLogRows ,
     NumLargeRows
   )
SELECT c.DBName ,
       'Bulk select into' AS DBRecModel , 13,
       c.[DataFile Size(MB)] ,
       c.[DataFile UsedSpace(MB)] ,
       c.[DataFile AvailableFreeSpace(MB)] ,
       c.LOG_FILEMB ,
       c.LOG_USED_SIZEMB ,
       c.[Percent Log Used] ,
       a.MaxLogRowSize ,
       a.NumLogRows ,
       a.NumLargeRows
FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                DB_NAME() AS DBName ,
                MAX([Log Record Length]) MaxLogRowSize ,
                COUNT(*) NumLogRows ,
                ( SELECT    COUNT(*)
                  FROM      fn_dblog(NULL, NULL)
                  WHERE     [Log Record Length] > 8000
                ) AS NumLargeRows
         FROM      fn_dblog(NULL, NULL)
       ) a
       INNER JOIN ( SELECT DBName ,
  --     name ,
    --   [filename] ,
                           Size AS 'DataFile Size(MB)' ,
                           UsedSpace AS 'DataFile UsedSpace(MB)' ,
                           ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                           b.LOG_FILEMB ,
                           b.LOG_USED_SIZEMB ,
                           b.[Percent Log Used]
                    FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                       s.name AS [Name] ,
                                       s.physical_name AS [FileName] ,
                                       ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                       ( CAST(CASE s.type
                                                WHEN 2 THEN 0
                                                ELSE CAST(FILEPROPERTY(s.name,
                                                          'SpaceUsed') AS FLOAT)
                                                     * CONVERT(FLOAT, 8)
                                              END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                       s.file_id AS [ID]
                             FROM      sys.filegroups AS g
                                       INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                             OR s.type = 0
                                                                             )
                                                                             AND s.database_id = DB_ID()
                                                                             AND ( s.drop_lsn IS NULL )
                                                                             )
                                                                             AND ( s.data_space_id =
g.data_space_id )
                           ) DBFileSizeInfo
```

```
                        INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                     ( ( [Data File(s) Size (KB)] )
                                       / 1024 ) AS Data_FileMB ,
                                     ( [LOG File(s) Size (KB)]
                                       / 1024 ) AS LOG_FILEMB ,
                                     ( [Log File(s) Used Size (KB)]
                                       / 1024 ) AS LOG_USED_SIZEMB ,
                                     [Percent Log Used]
                                FROM   ( SELECT    *
                                         FROM
sys.dm_os_performance_counters
                                         WHERE     counter_name IN (
                                                   'Data File(s) Size (KB)',
                                                   'Log File(s) Size (KB)',
                                                   'Log File(s) Used Size (KB)',
                                                   'Percent Log Used' )
                                                   AND instance_name != '_Total'
                                                   AND instance_name =
'Mich_test'
                                       ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                    ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/* Bulk Backup to Nul --truncate log */
Backup database [Mich_test] to disk = 'NUL:' WITH NO_COMPRESSION;



insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Bulk backup database to nul 2nd' AS DBRecModel ,14,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
```

```
        a.NumLargeRows
FROM    ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
    --      name ,
      --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                           'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
```

```
                                                        AND instance_name != '_Total'
                                                        AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

/*truncate log*/
BACKUP LOG [Mich_test] TO DISK = 'NUL:' WITH NO_COMPRESSION;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Bulk backup log to nul 2nd' AS DBRecModel , 15,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                         Size AS 'DataFile Size(MB)' ,
                         UsedSpace AS 'DataFile UsedSpace(MB)' ,
                         ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
```

```
                        b.LOG_FILEMB ,
                        b.LOG_USED_SIZEMB ,
                        b.[Percent Log Used]
                FROM    ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                    s.name AS [Name] ,
                                    s.physical_name AS [FileName] ,
                                    ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                    ( CAST(CASE s.type
                                             WHEN 2 THEN 0
                                             ELSE CAST(FILEPROPERTY(s.name,
                                                       'SpaceUsed') AS FLOAT)
                                                  * CONVERT(FLOAT, 8)
                                           END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                    s.file_id AS [ID]
                          FROM      sys.filegroups AS g
                                    INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                          OR s.type = 0
                                                                          )
                                                                          AND s.database_id = DB_ID()
                                                                          AND ( s.drop_lsn IS NULL )
                                                                          )
                                                                          AND ( s.data_space_id =
g.data_space_id )
                        ) DBFileSizeInfo
                        INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                            ( ( [Data File(s) Size (KB)] )
                                              / 1024 ) AS Data_FileMB ,
                                            ( [LOG File(s) Size (KB)]
                                              / 1024 ) AS LOG_FILEMB ,
                                            ( [Log File(s) Used Size (KB)]
                                              / 1024 ) AS LOG_USED_SIZEMB ,
                                            [Percent Log Used]
                                     FROM   ( SELECT    *
                                              FROM
sys.dm_os_performance_counters
                                              WHERE     counter_name IN (
                                                        'Data File(s) Size (KB)',
                                                        'Log File(s) Size (KB)',
                                                        'Log File(s) Used Size (KB)',
                                                        'Percent Log Used' )
                                                        AND instance_name != '_Total'
                                                        AND instance_name =
'Mich_test'
                                            ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

-------------------------------------------------------------------------------------
-----------------------
/*now test insert into*/
```

```
/*create table in bulk*/

CREATE TABLE [dbo].[Fact_Auto_Call_Activity_BULK_INSERT](
	[PTPid] [bigint] NOT NULL,
	[Dim_Acct_ID] [int] NOT NULL,
	[Dim_Cust_ID] [int] NOT NULL,
	[Dim_Dlr_ID] [int] NOT NULL,
	[Dim_Pool_ID] [int] NOT NULL,
	[Dim_Program_ID] [int] NOT NULL,
	[Dim_Associate_ID] [int] NOT NULL,
	[Dim_Date_Id] [date] NOT NULL,
	[Act_Acct_Num] [varchar](17) NOT NULL,
	[Act_App_Id] [int] NOT NULL,
	[Act_Dlr_ID] [varchar](15) NOT NULL,
	[Acm_Pool_Id] [int] NOT NULL,
	[Act_Call_Type] [varchar](8) NOT NULL,
	[Act_Sys_Act] [varchar](4) NULL,
	[Act_Call_Act] [varchar](4) NOT NULL,
	[Act_Call_Desc] [varchar](255) NULL,
	[Act_Total_Call] [int] NOT NULL,
	[Act_Right_Party] [int] NOT NULL,
	[Act_Wrong_Party] [int] NOT NULL,
	[Act_Prom] [int] NOT NULL,
	[Act_Prom_kept] [int] NOT NULL,
	[Act_Prom_Broke] [int] NOT NULL,
	[Act_Prom_Canc] [int] NOT NULL,
	[Act_Balance] [decimal](15, 3) NULL,
	[Act_Amt_due] [decimal](15, 3) NULL,
	[Act_Due_Date] [datetime] NULL,
	[Act_Kept_Amt] [decimal](15, 3) NULL,
	[Act_Kept_Bal] [decimal](15, 3) NULL,
	[Act_Prom_Dt1] [datetime] NULL,
	[Act_Prom_Dt2] [datetime] NULL,
	[Act_Prom_Amt1] [decimal](15, 3) NULL,
	[Act_Prom_Amt2] [decimal](15, 3) NULL,
	[Act_Prom_Res_Dt1] [datetime] NULL,
	[Act_Prom_Res_Dt2] [datetime] NULL,
	[Act_Prom_Res_Kept] [int] NOT NULL,
	[Act_Prom_Res_Broke] [int] NOT NULL,
	[Act_Prom_Res_Canc] [int] NOT NULL,
	[Act_Call_Time] [datetime] NULL,
	[Act_Time_Zone] [varchar](2) NULL,
	[Act_Act_Type] [varchar](5) NULL,
	[Act_Dlq_Days] [int] NULL,
	[Act_Res_Dlq_Days1] [int] NULL,
	[Act_Res_Dlq_Days2] [int] NULL,
	[Act_Act_Sequence] [int] NULL,
	[Act_Etl_Load_Dt] [datetime] NULL,
	[Act_Etl_Update_Dt] [datetime] NULL,
	[Act_Snapshot_Dt] [date] NOT NULL,
	[Dim_Date_Id_Int] [bigint] NULL,
	[Act_Due_Date_Int] [bigint] NULL,
	[Act_Prom_Dt1_Int] [bigint] NULL,
	[Act_Prom_Dt2_Int] [bigint] NULL,
	[Act_Prom_Res_Dt1_Int] [bigint] NULL,
	[Act_Prom_Res_Dt2_Int] [bigint] NULL,
	[Act_Call_Time_Int] [bigint] NULL,
PRIMARY KEY CLUSTERED
```

```
(
       [PTPid] ASC
) ON [PRIMARY]
) ON [PRIMARY]

GO

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Bulk create table' AS DBRecModel , 16,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                           'SpaceUsed') AS FLOAT)
```

```
                                                * CONVERT(FLOAT, 8)
                                        END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                    s.file_id AS [ID]
                            FROM    sys.filegroups AS g
                                    INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                          OR s.type = 0
                                                                          )
                                                                          AND s.database_id = DB_ID()
                                                                          AND ( s.drop_lsn IS NULL )
                                                                          )
                                                                          AND ( s.data_space_id =
g.data_space_id )
                          ) DBFileSizeInfo
                          INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                              ( ( [Data File(s) Size (KB)] )
                                                / 1024 ) AS Data_FileMB ,
                                              ( [LOG File(s) Size (KB)]
                                                / 1024 ) AS LOG_FILEMB ,
                                              ( [Log File(s) Used Size (KB)]
                                                / 1024 ) AS LOG_USED_SIZEMB ,
                                              [Percent Log Used]
                                       FROM   ( SELECT    *
                                                FROM
sys.dm_os_performance_counters
                                                WHERE     counter_name IN (
                                                          'Data File(s) Size (KB)',
                                                          'Log File(s) Size (KB)',
                                                          'Log File(s) Used Size (KB)',
                                                          'Percent Log Used' )
                                                          AND instance_name != '_Total'
                                                          AND instance_name =
'Mich_test'
                                              ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;


INSERT INTO [dbo].[Fact_Auto_Call_Activity_BULK_INSERT]
           ([PTPid]
           ,[Dim_Acct_ID]
           ,[Dim_Cust_ID]
           ,[Dim_Dlr_ID]
           ,[Dim_Pool_ID]
           ,[Dim_Program_ID]
           ,[Dim_Associate_ID]
           ,[Dim_Date_Id]
           ,[Act_Acct_Num]
           ,[Act_App_Id]
           ,[Act_Dlr_ID]
```

```
           ,[Acm_Pool_Id]
           ,[Act_Call_Type]
           ,[Act_Sys_Act]
           ,[Act_Call_Act]
           ,[Act_Call_Desc]
           ,[Act_Total_Call]
           ,[Act_Right_Party]
           ,[Act_Wrong_Party]
           ,[Act_Prom]
           ,[Act_Prom_kept]
           ,[Act_Prom_Broke]
           ,[Act_Prom_Canc]
           ,[Act_Balance]
           ,[Act_Amt_due]
           ,[Act_Due_Date]
           ,[Act_Kept_Amt]
           ,[Act_Kept_Bal]
           ,[Act_Prom_Dt1]
           ,[Act_Prom_Dt2]
           ,[Act_Prom_Amt1]
           ,[Act_Prom_Amt2]
           ,[Act_Prom_Res_Dt1]
           ,[Act_Prom_Res_Dt2]
           ,[Act_Prom_Res_Kept]
           ,[Act_Prom_Res_Broke]
           ,[Act_Prom_Res_Canc]
           ,[Act_Call_Time]
           ,[Act_Time_Zone]
           ,[Act_Act_Type]
           ,[Act_Dlq_Days]
           ,[Act_Res_Dlq_Days1]
           ,[Act_Res_Dlq_Days2]
           ,[Act_Act_Sequence]
           ,[Act_Etl_Load_Dt]
           ,[Act_Etl_Update_Dt]
           ,[Act_Snapshot_Dt]
           ,[Dim_Date_Id_Int]
           ,[Act_Due_Date_Int]
           ,[Act_Prom_Dt1_Int]
           ,[Act_Prom_Dt2_Int]
           ,[Act_Prom_Res_Dt1_Int]
           ,[Act_Prom_Res_Dt2_Int]
           ,[Act_Call_Time_Int])
select [PTPid]
           ,[Dim_Acct_ID]
           ,[Dim_Cust_ID]
           ,[Dim_Dlr_ID]
           ,[Dim_Pool_ID]
           ,[Dim_Program_ID]
           ,[Dim_Associate_ID]
           ,[Dim_Date_Id]
           ,[Act_Acct_Num]
           ,[Act_App_Id]
           ,[Act_Dlr_ID]
           ,[Acm_Pool_Id]
           ,[Act_Call_Type]
           ,[Act_Sys_Act]
           ,[Act_Call_Act]
```

```
            ,[Act_Call_Desc]
            ,[Act_Total_Call]
            ,[Act_Right_Party]
            ,[Act_Wrong_Party]
            ,[Act_Prom]
            ,[Act_Prom_kept]
            ,[Act_Prom_Broke]
            ,[Act_Prom_Canc]
            ,[Act_Balance]
            ,[Act_Amt_due]
            ,[Act_Due_Date]
            ,[Act_Kept_Amt]
            ,[Act_Kept_Bal]
            ,[Act_Prom_Dt1]
            ,[Act_Prom_Dt2]
            ,[Act_Prom_Amt1]
            ,[Act_Prom_Amt2]
            ,[Act_Prom_Res_Dt1]
            ,[Act_Prom_Res_Dt2]
            ,[Act_Prom_Res_Kept]
            ,[Act_Prom_Res_Broke]
            ,[Act_Prom_Res_Canc]
            ,[Act_Call_Time]
            ,[Act_Time_Zone]
            ,[Act_Act_Type]
            ,[Act_Dlq_Days]
            ,[Act_Res_Dlq_Days1]
            ,[Act_Res_Dlq_Days2]
            ,[Act_Act_Sequence]
            ,[Act_Etl_Load_Dt]
            ,[Act_Etl_Update_Dt]
            ,[Act_Snapshot_Dt]
            ,[Dim_Date_Id_Int]
            ,[Act_Due_Date_Int]
            ,[Act_Prom_Dt1_Int]
            ,[Act_Prom_Dt2_Int]
            ,[Act_Prom_Res_Dt1_Int]
            ,[Act_Prom_Res_Dt2_Int]
            ,[Act_Call_Time_Int]
from AUTO_EDW.[dbo].[Fact_Auto_Call_Activity];

CREATE table BulkLOG_INSERT(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
       [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));

INSERT  INTO BulkLOG_INSERT([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction

insert into SELECTINTOLoggingData
    ( DBName ,
```

```
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
SELECT c.DBName ,
       'Bulk insert into' AS DBRecModel , 17,
       c.[DataFile Size(MB)] ,
       c.[DataFile UsedSpace(MB)] ,
       c.[DataFile AvailableFreeSpace(MB)] ,
       c.LOG_FILEMB ,
       c.LOG_USED_SIZEMB ,
       c.[Percent Log Used] ,
       a.MaxLogRowSize ,
       a.NumLogRows ,
       a.NumLargeRows
FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                DB_NAME() AS DBName ,
                MAX([Log Record Length]) MaxLogRowSize ,
                COUNT(*) NumLogRows ,
                ( SELECT    COUNT(*)
                  FROM      fn_dblog(NULL, NULL)
                  WHERE     [Log Record Length] > 8000
                ) AS NumLargeRows
         FROM      fn_dblog(NULL, NULL)
       ) a
       INNER JOIN ( SELECT DBName ,
  --      name ,
    --    [filename] ,
                           Size AS 'DataFile Size(MB)' ,
                           UsedSpace AS 'DataFile UsedSpace(MB)' ,
                           ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                           b.LOG_FILEMB ,
                           b.LOG_USED_SIZEMB ,
                           b.[Percent Log Used]
                    FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                       s.name AS [Name] ,
                                       s.physical_name AS [FileName] ,
                                       ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                       ( CAST(CASE s.type
                                                WHEN 2 THEN 0
                                                ELSE CAST(FILEPROPERTY(s.name,
                                                          'SpaceUsed') AS FLOAT)
                                                     * CONVERT(FLOAT, 8)
                                              END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                       s.file_id AS [ID]
                             FROM      sys.filegroups AS g
                                       INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                             OR s.type = 0
                                                                             )
                                                                             AND s.database_id = DB_ID()
```

```
                                                    AND ( s.drop_lsn IS NULL )
                                                    )
                                                    AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

-------------------------------------------------------------------------------------------
-------------
/*moving to FULL*/
ALTER DATABASE [Mich_test] SET RECOVERY FULL;
/* FULL Backup to Nul --truncate log */
Backup database [Mich_test] to disk = 'NUL:' WITH NO_COMPRESSION;



insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
```

```
        'Full backup database to nul 2nd' AS DBRecModel ,18,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
FROM    ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
  --      name ,
    --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                                        'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
```

```
                                        [Percent Log Used]
                                FROM    ( SELECT    *
                                  FROM
sys.dm_os_performance_counters
                                  WHERE     counter_name IN (
                                            'Data File(s) Size (KB)',
                                            'Log File(s) Size (KB)',
                                            'Log File(s) Used Size (KB)',
                                            'Percent Log Used' )
                                            AND instance_name != '_Total'
                                            AND instance_name =
'Mich_test'
                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                    ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;


/*truncate log*/
BACKUP LOG [Mich_test] TO DISK = 'NUL:' WITH NO_COMPRESSION;


insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Full backup log to nul 2nd' AS DBRecModel , 19,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
```

```
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
    --      name ,
      --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                                        'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
```

```
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                    ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

-------------------------------------------------------------------------------------------
-----------------------
/*now test insert into*/
/*create table in full*/

CREATE TABLE [dbo].[Fact_Auto_Call_Activity_Full_INSERT](
       [PTPid] [bigint] NOT NULL,
       [Dim_Acct_ID] [int] NOT NULL,
       [Dim_Cust_ID] [int] NOT NULL,
       [Dim_Dlr_ID] [int] NOT NULL,
       [Dim_Pool_ID] [int] NOT NULL,
       [Dim_Program_ID] [int] NOT NULL,
       [Dim_Associate_ID] [int] NOT NULL,
       [Dim_Date_Id] [date] NOT NULL,
       [Act_Acct_Num] [varchar](17) NOT NULL,
       [Act_App_Id] [int] NOT NULL,
       [Act_Dlr_ID] [varchar](15) NOT NULL,
       [Acm_Pool_Id] [int] NOT NULL,
       [Act_Call_Type] [varchar](8) NOT NULL,
       [Act_Sys_Act] [varchar](4) NULL,
       [Act_Call_Act] [varchar](4) NOT NULL,
       [Act_Call_Desc] [varchar](255) NULL,
       [Act_Total_Call] [int] NOT NULL,
       [Act_Right_Party] [int] NOT NULL,
       [Act_Wrong_Party] [int] NOT NULL,
       [Act_Prom] [int] NOT NULL,
       [Act_Prom_kept] [int] NOT NULL,
       [Act_Prom_Broke] [int] NOT NULL,
       [Act_Prom_Canc] [int] NOT NULL,
       [Act_Balance] [decimal](15, 3) NULL,
       [Act_Amt_due] [decimal](15, 3) NULL,
       [Act_Due_Date] [datetime] NULL,
       [Act_Kept_Amt] [decimal](15, 3) NULL,
       [Act_Kept_Bal] [decimal](15, 3) NULL,
       [Act_Prom_Dt1] [datetime] NULL,
       [Act_Prom_Dt2] [datetime] NULL,
       [Act_Prom_Amt1] [decimal](15, 3) NULL,
       [Act_Prom_Amt2] [decimal](15, 3) NULL,
       [Act_Prom_Res_Dt1] [datetime] NULL,
       [Act_Prom_Res_Dt2] [datetime] NULL,
       [Act_Prom_Res_Kept] [int] NOT NULL,
       [Act_Prom_Res_Broke] [int] NOT NULL,
       [Act_Prom_Res_Canc] [int] NOT NULL,
       [Act_Call_Time] [datetime] NULL,
       [Act_Time_Zone] [varchar](2) NULL,
       [Act_Act_Type] [varchar](5) NULL,
       [Act_Dlq_Days] [int] NULL,
       [Act_Res_Dlq_Days1] [int] NULL,
       [Act_Res_Dlq_Days2] [int] NULL,
       [Act_Act_Sequence] [int] NULL,
       [Act_Etl_Load_Dt] [datetime] NULL,
```

```
	[Act_Etl_Update_Dt] [datetime] NULL,
	[Act_Snapshot_Dt] [date] NOT NULL,
	[Dim_Date_Id_Int] [bigint] NULL,
	[Act_Due_Date_Int] [bigint] NULL,
	[Act_Prom_Dt1_Int] [bigint] NULL,
	[Act_Prom_Dt2_Int] [bigint] NULL,
	[Act_Prom_Res_Dt1_Int] [bigint] NULL,
	[Act_Prom_Res_Dt2_Int] [bigint] NULL,
	[Act_Call_Time_Int] [bigint] NULL,
PRIMARY KEY CLUSTERED
(
	[PTPid] ASC
) ON [PRIMARY]
) ON [PRIMARY]

GO

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Full create table' AS DBRecModel , 20,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                          Size AS 'DataFile Size(MB)' ,
                          UsedSpace AS 'DataFile UsedSpace(MB)' ,
                          ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                          b.LOG_FILEMB ,
```

```
                        b.LOG_USED_SIZEMB ,
                        b.[Percent Log Used]
                FROM    ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                    s.name AS [Name] ,
                                    s.physical_name AS [FileName] ,
                                    ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                    ( CAST(CASE s.type
                                             WHEN 2 THEN 0
                                             ELSE CAST(FILEPROPERTY(s.name,
                                                       'SpaceUsed') AS FLOAT)
                                                  * CONVERT(FLOAT, 8)
                                           END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                    s.file_id AS [ID]
                          FROM      sys.filegroups AS g
                                    INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                          OR s.type = 0
                                                                          )
                                                                          AND s.database_id = DB_ID()
                                                                          AND ( s.drop_lsn IS NULL )
                                                                          )
                                                                          AND ( s.data_space_id =
g.data_space_id )
                        ) DBFileSizeInfo
                        INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                            ( ( [Data File(s) Size (KB)] )
                                              / 1024 ) AS Data_FileMB ,
                                            ( [LOG File(s) Size (KB)]
                                              / 1024 ) AS LOG_FILEMB ,
                                            ( [Log File(s) Used Size (KB)]
                                              / 1024 ) AS LOG_USED_SIZEMB ,
                                            [Percent Log Used]
                                     FROM   ( SELECT    *
                                              FROM
sys.dm_os_performance_counters
                                              WHERE     counter_name IN (
                                                        'Data File(s) Size (KB)',
                                                        'Log File(s) Size (KB)',
                                                        'Log File(s) Used Size (KB)',
                                                        'Percent Log Used' )
                                                        AND instance_name != '_Total'
                                                        AND instance_name =
'Mich_test'
                                            ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;


INSERT INTO [dbo].[Fact_Auto_Call_Activity_Full_INSERT]
           ([PTPid]
```

```
           ,[Dim_Acct_ID]
           ,[Dim_Cust_ID]
           ,[Dim_Dlr_ID]
           ,[Dim_Pool_ID]
           ,[Dim_Program_ID]
           ,[Dim_Associate_ID]
           ,[Dim_Date_Id]
           ,[Act_Acct_Num]
           ,[Act_App_Id]
           ,[Act_Dlr_ID]
           ,[Acm_Pool_Id]
           ,[Act_Call_Type]
           ,[Act_Sys_Act]
           ,[Act_Call_Act]
           ,[Act_Call_Desc]
           ,[Act_Total_Call]
           ,[Act_Right_Party]
           ,[Act_Wrong_Party]
           ,[Act_Prom]
           ,[Act_Prom_kept]
           ,[Act_Prom_Broke]
           ,[Act_Prom_Canc]
           ,[Act_Balance]
           ,[Act_Amt_due]
           ,[Act_Due_Date]
           ,[Act_Kept_Amt]
           ,[Act_Kept_Bal]
           ,[Act_Prom_Dt1]
           ,[Act_Prom_Dt2]
           ,[Act_Prom_Amt1]
           ,[Act_Prom_Amt2]
           ,[Act_Prom_Res_Dt1]
           ,[Act_Prom_Res_Dt2]
           ,[Act_Prom_Res_Kept]
           ,[Act_Prom_Res_Broke]
           ,[Act_Prom_Res_Canc]
           ,[Act_Call_Time]
           ,[Act_Time_Zone]
           ,[Act_Act_Type]
           ,[Act_Dlq_Days]
           ,[Act_Res_Dlq_Days1]
           ,[Act_Res_Dlq_Days2]
           ,[Act_Act_Sequence]
           ,[Act_Etl_Load_Dt]
           ,[Act_Etl_Update_Dt]
           ,[Act_Snapshot_Dt]
           ,[Dim_Date_Id_Int]
           ,[Act_Due_Date_Int]
           ,[Act_Prom_Dt1_Int]
           ,[Act_Prom_Dt2_Int]
           ,[Act_Prom_Res_Dt1_Int]
           ,[Act_Prom_Res_Dt2_Int]
           ,[Act_Call_Time_Int])
select [PTPid]
           ,[Dim_Acct_ID]
           ,[Dim_Cust_ID]
           ,[Dim_Dlr_ID]
           ,[Dim_Pool_ID]
```

```
           ,[Dim_Program_ID]
           ,[Dim_Associate_ID]
           ,[Dim_Date_Id]
           ,[Act_Acct_Num]
           ,[Act_App_Id]
           ,[Act_Dlr_ID]
           ,[Acm_Pool_Id]
           ,[Act_Call_Type]
           ,[Act_Sys_Act]
           ,[Act_Call_Act]
           ,[Act_Call_Desc]
           ,[Act_Total_Call]
           ,[Act_Right_Party]
           ,[Act_Wrong_Party]
           ,[Act_Prom]
           ,[Act_Prom_kept]
           ,[Act_Prom_Broke]
           ,[Act_Prom_Canc]
           ,[Act_Balance]
           ,[Act_Amt_due]
           ,[Act_Due_Date]
           ,[Act_Kept_Amt]
           ,[Act_Kept_Bal]
           ,[Act_Prom_Dt1]
           ,[Act_Prom_Dt2]
           ,[Act_Prom_Amt1]
           ,[Act_Prom_Amt2]
           ,[Act_Prom_Res_Dt1]
           ,[Act_Prom_Res_Dt2]
           ,[Act_Prom_Res_Kept]
           ,[Act_Prom_Res_Broke]
           ,[Act_Prom_Res_Canc]
           ,[Act_Call_Time]
           ,[Act_Time_Zone]
           ,[Act_Act_Type]
           ,[Act_Dlq_Days]
           ,[Act_Res_Dlq_Days1]
           ,[Act_Res_Dlq_Days2]
           ,[Act_Act_Sequence]
           ,[Act_Etl_Load_Dt]
           ,[Act_Etl_Update_Dt]
           ,[Act_Snapshot_Dt]
           ,[Dim_Date_Id_Int]
           ,[Act_Due_Date_Int]
           ,[Act_Prom_Dt1_Int]
           ,[Act_Prom_Dt2_Int]
           ,[Act_Prom_Res_Dt1_Int]
           ,[Act_Prom_Res_Dt2_Int]
           ,[Act_Call_Time_Int]
from AUTO_EDW.[dbo].[Fact_Auto_Call_Activity];

CREATE table FULLLOG_INSERT(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
       [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));
```

```
INSERT  INTO FULLLOG_INSERT([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID])
select
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Full insert into' AS DBRecModel , 21,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
```

```
                                        ELSE CAST(FILEPROPERTY(s.name,
                                                  'SpaceUsed') AS FLOAT)
                                             * CONVERT(FLOAT, 8)
                                    END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                s.file_id AS [ID]
                          FROM  sys.filegroups AS g
                                INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                    OR s.type = 0
                                                    )
                                                    AND s.database_id = DB_ID()
                                                    AND ( s.drop_lsn IS NULL )
                                                    )
                                                    AND ( s.data_space_id =
g.data_space_id )
                        ) DBFileSizeInfo
                        INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                        ( ( [Data File(s) Size (KB)] )
                                          / 1024 ) AS Data_FileMB ,
                                        ( [LOG File(s) Size (KB)]
                                          / 1024 ) AS LOG_FILEMB ,
                                        ( [Log File(s) Used Size (KB)]
                                          / 1024 ) AS LOG_USED_SIZEMB ,
                                        [Percent Log Used]
                                     FROM   ( SELECT    *
                                              FROM
sys.dm_os_performance_counters
                                              WHERE     counter_name IN (
                                                        'Data File(s) Size (KB)',
                                                        'Log File(s) Size (KB)',
                                                        'Log File(s) Used Size (KB)',
                                                        'Percent Log Used' )
                                                        AND instance_name != '_Total'
                                                        AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;

-------------------------------------------------------------------------------------------
---------
/*go simple 22*/
-------------------------------------------------------------------------------------------
-------------

/* FULL Backup to Nul --truncate log */
Backup database [Mich_test] to disk = 'NUL:' WITH NO_COMPRESSION;


/*truncate log*/
BACKUP LOG [Mich_test] TO DISK = 'NUL:' WITH NO_COMPRESSION;
```

```
/*moving to FULL*/
ALTER DATABASE [Mich_test] SET RECOVERY SIMPLE;

-------------------------------------------------------------------------------------------
----------------------
/*now test insert into*/
/*create table in simple*/

CREATE TABLE [dbo].[Fact_Auto_Call_Activity_Simple_INSERT](
	[PTPid] [bigint] NOT NULL,
	[Dim_Acct_ID] [int] NOT NULL,
	[Dim_Cust_ID] [int] NOT NULL,
	[Dim_Dlr_ID] [int] NOT NULL,
	[Dim_Pool_ID] [int] NOT NULL,
	[Dim_Program_ID] [int] NOT NULL,
	[Dim_Associate_ID] [int] NOT NULL,
	[Dim_Date_Id] [date] NOT NULL,
	[Act_Acct_Num] [varchar](17) NOT NULL,
	[Act_App_Id] [int] NOT NULL,
	[Act_Dlr_ID] [varchar](15) NOT NULL,
	[Acm_Pool_Id] [int] NOT NULL,
	[Act_Call_Type] [varchar](8) NOT NULL,
	[Act_Sys_Act] [varchar](4) NULL,
	[Act_Call_Act] [varchar](4) NOT NULL,
	[Act_Call_Desc] [varchar](255) NULL,
	[Act_Total_Call] [int] NOT NULL,
	[Act_Right_Party] [int] NOT NULL,
	[Act_Wrong_Party] [int] NOT NULL,
	[Act_Prom] [int] NOT NULL,
	[Act_Prom_kept] [int] NOT NULL,
	[Act_Prom_Broke] [int] NOT NULL,
	[Act_Prom_Canc] [int] NOT NULL,
	[Act_Balance] [decimal](15, 3) NULL,
	[Act_Amt_due] [decimal](15, 3) NULL,
	[Act_Due_Date] [datetime] NULL,
	[Act_Kept_Amt] [decimal](15, 3) NULL,
	[Act_Kept_Bal] [decimal](15, 3) NULL,
	[Act_Prom_Dt1] [datetime] NULL,
	[Act_Prom_Dt2] [datetime] NULL,
	[Act_Prom_Amt1] [decimal](15, 3) NULL,
	[Act_Prom_Amt2] [decimal](15, 3) NULL,
	[Act_Prom_Res_Dt1] [datetime] NULL,
	[Act_Prom_Res_Dt2] [datetime] NULL,
	[Act_Prom_Res_Kept] [int] NOT NULL,
	[Act_Prom_Res_Broke] [int] NOT NULL,
	[Act_Prom_Res_Canc] [int] NOT NULL,
	[Act_Call_Time] [datetime] NULL,
	[Act_Time_Zone] [varchar](2) NULL,
	[Act_Act_Type] [varchar](5) NULL,
	[Act_Dlq_Days] [int] NULL,
	[Act_Res_Dlq_Days1] [int] NULL,
	[Act_Res_Dlq_Days2] [int] NULL,
	[Act_Act_Sequence] [int] NULL,
	[Act_Etl_Load_Dt] [datetime] NULL,
	[Act_Etl_Update_Dt] [datetime] NULL,
	[Act_Snapshot_Dt] [date] NOT NULL,
	[Dim_Date_Id_Int] [bigint] NULL,
```

```
	[Act_Due_Date_Int] [bigint] NULL,
	[Act_Prom_Dt1_Int] [bigint] NULL,
	[Act_Prom_Dt2_Int] [bigint] NULL,
	[Act_Prom_Res_Dt1_Int] [bigint] NULL,
	[Act_Prom_Res_Dt2_Int] [bigint] NULL,
	[Act_Call_Time_Int] [bigint] NULL,
PRIMARY KEY CLUSTERED
(
	[PTPid] ASC
) ON [PRIMARY]
) ON [PRIMARY]

GO

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Simple create table' AS DBRecModel , 22,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --      name ,
     --    [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
```

```
                                    s.name AS [Name] ,
                                    s.physical_name AS [FileName] ,
                                    ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                    ( CAST(CASE s.type
                                             WHEN 2 THEN 0
                                             ELSE CAST(FILEPROPERTY(s.name,
                                                       'SpaceUsed') AS FLOAT)
                                                  * CONVERT(FLOAT, 8)
                                           END AS FLOAT) ) / 1024 AS [UsedSpace] ,
                                    s.file_id AS [ID]
                             FROM   sys.filegroups AS g
                                    INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                          OR s.type = 0
                                                                          )
                                                                          AND s.database_id = DB_ID()
                                                                          AND ( s.drop_lsn IS NULL )
                                                                          )
                                                                          AND ( s.data_space_id =
g.data_space_id )
                           ) DBFileSizeInfo
                           INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                               ( ( [Data File(s) Size (KB)] )
                                                 / 1024 ) AS Data_FileMB ,
                                               ( [LOG File(s) Size (KB)]
                                                 / 1024 ) AS LOG_FILEMB ,
                                               ( [Log File(s) Used Size (KB)]
                                                 / 1024 ) AS LOG_USED_SIZEMB ,
                                               [Percent Log Used]
                                        FROM   ( SELECT    *
                                                 FROM
sys.dm_os_performance_counters
                                                 WHERE     counter_name IN (
                                                           'Data File(s) Size (KB)',
                                                           'Log File(s) Size (KB)',
                                                           'Log File(s) Used Size (KB)',
                                                           'Percent Log Used' )
                                                           AND instance_name != '_Total'
                                                           AND instance_name =
'Mich_test'
                                               ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                      ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;



INSERT INTO [dbo].[Fact_Auto_Call_Activity_Simple_INSERT]
           ([PTPid]
           ,[Dim_Acct_ID]
           ,[Dim_Cust_ID]
           ,[Dim_Dlr_ID]
```

```
           ,[Dim_Pool_ID]
           ,[Dim_Program_ID]
           ,[Dim_Associate_ID]
           ,[Dim_Date_Id]
           ,[Act_Acct_Num]
           ,[Act_App_Id]
           ,[Act_Dlr_ID]
           ,[Acm_Pool_Id]
           ,[Act_Call_Type]
           ,[Act_Sys_Act]
           ,[Act_Call_Act]
           ,[Act_Call_Desc]
           ,[Act_Total_Call]
           ,[Act_Right_Party]
           ,[Act_Wrong_Party]
           ,[Act_Prom]
           ,[Act_Prom_kept]
           ,[Act_Prom_Broke]
           ,[Act_Prom_Canc]
           ,[Act_Balance]
           ,[Act_Amt_due]
           ,[Act_Due_Date]
           ,[Act_Kept_Amt]
           ,[Act_Kept_Bal]
           ,[Act_Prom_Dt1]
           ,[Act_Prom_Dt2]
           ,[Act_Prom_Amt1]
           ,[Act_Prom_Amt2]
           ,[Act_Prom_Res_Dt1]
           ,[Act_Prom_Res_Dt2]
           ,[Act_Prom_Res_Kept]
           ,[Act_Prom_Res_Broke]
           ,[Act_Prom_Res_Canc]
           ,[Act_Call_Time]
           ,[Act_Time_Zone]
           ,[Act_Act_Type]
           ,[Act_Dlq_Days]
           ,[Act_Res_Dlq_Days1]
           ,[Act_Res_Dlq_Days2]
           ,[Act_Act_Sequence]
           ,[Act_Etl_Load_Dt]
           ,[Act_Etl_Update_Dt]
           ,[Act_Snapshot_Dt]
           ,[Dim_Date_Id_Int]
           ,[Act_Due_Date_Int]
           ,[Act_Prom_Dt1_Int]
           ,[Act_Prom_Dt2_Int]
           ,[Act_Prom_Res_Dt1_Int]
           ,[Act_Prom_Res_Dt2_Int]
           ,[Act_Call_Time_Int])
select [PTPid]
           ,[Dim_Acct_ID]
           ,[Dim_Cust_ID]
           ,[Dim_Dlr_ID]
           ,[Dim_Pool_ID]
           ,[Dim_Program_ID]
           ,[Dim_Associate_ID]
           ,[Dim_Date_Id]
```

```
            ,[Act_Acct_Num]
            ,[Act_App_Id]
            ,[Act_Dlr_ID]
            ,[Acm_Pool_Id]
            ,[Act_Call_Type]
            ,[Act_Sys_Act]
            ,[Act_Call_Act]
            ,[Act_Call_Desc]
            ,[Act_Total_Call]
            ,[Act_Right_Party]
            ,[Act_Wrong_Party]
            ,[Act_Prom]
            ,[Act_Prom_kept]
            ,[Act_Prom_Broke]
            ,[Act_Prom_Canc]
            ,[Act_Balance]
            ,[Act_Amt_due]
            ,[Act_Due_Date]
            ,[Act_Kept_Amt]
            ,[Act_Kept_Bal]
            ,[Act_Prom_Dt1]
            ,[Act_Prom_Dt2]
            ,[Act_Prom_Amt1]
            ,[Act_Prom_Amt2]
            ,[Act_Prom_Res_Dt1]
            ,[Act_Prom_Res_Dt2]
            ,[Act_Prom_Res_Kept]
            ,[Act_Prom_Res_Broke]
            ,[Act_Prom_Res_Canc]
            ,[Act_Call_Time]
            ,[Act_Time_Zone]
            ,[Act_Act_Type]
            ,[Act_Dlq_Days]
            ,[Act_Res_Dlq_Days1]
            ,[Act_Res_Dlq_Days2]
            ,[Act_Act_Sequence]
            ,[Act_Etl_Load_Dt]
            ,[Act_Etl_Update_Dt]
            ,[Act_Snapshot_Dt]
            ,[Dim_Date_Id_Int]
            ,[Act_Due_Date_Int]
            ,[Act_Prom_Dt1_Int]
            ,[Act_Prom_Dt2_Int]
            ,[Act_Prom_Res_Dt1_Int]
            ,[Act_Prom_Res_Dt2_Int]
            ,[Act_Call_Time_Int]
from AUTO_EDW.[dbo].[Fact_Auto_Call_Activity];

CREATE table SimpleLOG_INSERT(
[Current LSN] varchar(100), [Operation] varchar(100), [Transaction ID] varchar(100),
[Parent Transaction ID] varchar(100),
       [Begin Time] datetime, [Transaction Name] varchar(100), [Transaction SID]
varchar(100));

INSERT  INTO SimpleLOG_INSERT([Current LSN], [Operation], [Transaction ID], [Parent
Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID])
select
```

```
 [Current LSN], [Operation], [Transaction ID], [Parent Transaction ID],
       [Begin Time], [Transaction Name], [Transaction SID]
from fn_dblog(null, null);
--where [Operation] = 'LOP_BEGIN_XACT' --This is the start of each tranaction

insert into SELECTINTOLoggingData
    ( DBName ,
      DBRecModel , run,
         DataFileSizeMB,
         DataFileUsedMB ,
         DatafileAvailableMB ,
         LOGFileSizeMB ,
         LOGUsedSizeMB ,
         LogPercentUsed,
      MaxLogRowSize ,
      NumLogRows ,
      NumLargeRows
    )
 SELECT c.DBName ,
        'Simple insert into' AS DBRecModel , 23,
        c.[DataFile Size(MB)] ,
        c.[DataFile UsedSpace(MB)] ,
        c.[DataFile AvailableFreeSpace(MB)] ,
        c.LOG_FILEMB ,
        c.LOG_USED_SIZEMB ,
        c.[Percent Log Used] ,
        a.MaxLogRowSize ,
        a.NumLogRows ,
        a.NumLargeRows
 FROM   ( SELECT-- 'Simple before run' DBRecModel ,
                  DB_NAME() AS DBName ,
                  MAX([Log Record Length]) MaxLogRowSize ,
                  COUNT(*) NumLogRows ,
                  ( SELECT    COUNT(*)
                    FROM      fn_dblog(NULL, NULL)
                    WHERE     [Log Record Length] > 8000
                  ) AS NumLargeRows
          FROM      fn_dblog(NULL, NULL)
        ) a
        INNER JOIN ( SELECT DBName ,
   --     name ,
     --   [filename] ,
                            Size AS 'DataFile Size(MB)' ,
                            UsedSpace AS 'DataFile UsedSpace(MB)' ,
                            ( Size - UsedSpace ) AS 'DataFile AvailableFreeSpace(MB)' ,
                            b.LOG_FILEMB ,
                            b.LOG_USED_SIZEMB ,
                            b.[Percent Log Used]
                     FROM   ( SELECT    DB_NAME(s.database_id) AS DBName ,
                                        s.name AS [Name] ,
                                        s.physical_name AS [FileName] ,
                                        ( s.size * CONVERT(FLOAT, 8) ) / 1024 AS [Size] ,
                                        ( CAST(CASE s.type
                                                 WHEN 2 THEN 0
                                                 ELSE CAST(FILEPROPERTY(s.name,
                                                             'SpaceUsed') AS FLOAT)
                                                      * CONVERT(FLOAT, 8)
                                               END AS FLOAT) ) / 1024 AS [UsedSpace] ,
```

```
                                        s.file_id AS [ID]
                              FROM      sys.filegroups AS g
                                        INNER JOIN sys.master_files AS s ON ( ( s.type =
2
                                                                              OR s.type = 0
                                                                              )
                                                                              AND s.database_id = DB_ID()
                                                                              AND ( s.drop_lsn IS NULL )
                                                                              )
                                                                              AND ( s.data_space_id =
g.data_space_id )
                            ) DBFileSizeInfo
                            INNER JOIN ( SELECT instance_name AS DatabaseName ,
                                                ( ( [Data File(s) Size (KB)] )
                                                  / 1024 ) AS Data_FileMB ,
                                                ( [LOG File(s) Size (KB)]
                                                  / 1024 ) AS LOG_FILEMB ,
                                                ( [Log File(s) Used Size (KB)]
                                                  / 1024 ) AS LOG_USED_SIZEMB ,
                                                [Percent Log Used]
                                         FROM   ( SELECT    *
                                                  FROM
sys.dm_os_performance_counters
                                                  WHERE     counter_name IN (
                                                            'Data File(s) Size (KB)',
                                                            'Log File(s) Size (KB)',
                                                            'Log File(s) Used Size (KB)',
                                                            'Percent Log Used' )
                                                            AND instance_name != '_Total'
                                                            AND instance_name =
'Mich_test'
                                                ) AS Src PIVOT
( MAX(cntr_value) FOR counter_name IN ( [Data File(s) Size (KB)],
                                        [LOG File(s) Size (KB)],
                                        [Log File(s) Used Size (KB)],
                                        [Percent Log Used] ) ) AS pvt
                                       ) b ON DBFileSizeInfo.DBName = b.DatabaseName
                  ) c ON a.DBName = c.DBName;

SELECT  *
FROM    SELECTINTOLoggingData;
```