

How to drop all tables in a SQL Server database?

Asked 7 years, 9 months ago Active 6 months ago Viewed 214k times



I'm trying to write a script that will completely empty a SQL Server database. This is what I have so far:

152



```
USE [dbname]
GO
EXEC sp_msforeachtable 'ALTER TABLE ? NOCHECK CONSTRAINT all'
EXEC sp_msforeachtable 'DELETE ?'
```



68

When I run it in the Management Studio, I get:

Command(s) completed successfully.

but when I refresh the table list, they are all still there. What am I doing wrong?

sql-server sql-server-2008 ssms sp-msforeachtable

edited Nov 21 '17 at 7:02



Arulkumar

10.9k 12 37 52

asked Dec 9 '11 at 0:30



dixuji

763 2 6 4

If none of the solutions on this page are working, perhaps you forgot to: USE [DatabaseName] GO – [Serj Sagan](#) Nov 3 '14 at 1:58

- 2 DELETE ? will delete the records from the table. You should be using DROP TABLE ?, however that won't work for other reasons. – [datagod](#) Dec 8 '16 at 13:51

14 Answers

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```
DECLARE @Sql NVARCHAR(500) DECLARE @Cursor CURSOR

SET @Cursor = CURSOR FAST_FORWARD FOR
SELECT DISTINCT sql = 'ALTER TABLE [' + tc2.TABLE_SCHEMA + '].[' + tc2.TABLE_NAME + ']'
DROP [' + rc1.CONSTRAINT_NAME + '];'
FROM INFORMATION_SCHEMA.REFERENTIAL_CONSTRAINTS rc1
LEFT JOIN INFORMATION_SCHEMA.TABLE_CONSTRAINTS tc2 ON tc2.CONSTRAINT_NAME
=rc1.CONSTRAINT_NAME

OPEN @Cursor FETCH NEXT FROM @Cursor INTO @Sql

WHILE (@@FETCH_STATUS = 0)
BEGIN
    Exec sp_executesql @Sql
    FETCH NEXT FROM @Cursor INTO @Sql
END

CLOSE @Cursor DEALLOCATE @Cursor
GO

EXEC sp_MSforeachtable 'DROP TABLE ?'
GO
```

You can find the post [here](#). It is the post by Groker.

edited Mar 4 at 20:13



Justin Dearing

8,322 17 69 136

answered Dec 9 '11 at 0:53



Gabriel GM

4,572 2 26 31

Why is it when you try to wrap that entire block of code in a IF statement using a BEGIN-END block it complains about the cursor? – Adam Jul 1 '15 at 20:25

9 I am getting error Could not find stored procedure 'sp_MSForEachTable'. – Korayem Apr 27 '16 at 4:29

2 This answer does not work if you have tables (with constraints) in a different schema than dbo . If you have custom schemas, you need to alter the sql to: SELECT DISTINCT sql = 'ALTER TABLE [' + tc2.CONSTRAINT_SCHEMA + '].[' + tc2.TABLE_NAME + ']' DROP [' + rc1.CONSTRAINT_NAME + ']' – Asbjørn Ulsberg Nov 3 '16 at 8:59 ✎

4 sp_MSforeachtable is not available in Azure. Use @CountZero's answer instead. – Oggilas Jan 19 '18 at 8:58

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You can also delete all tables from database using only MSSMS tools (without using sql). Sometimes this way can be more comfortable (especially if it is performed occasionally)

I do this step by step as follows:

1. Select 'Tables' on the database tree (Object Explorer)
2. Press F7 to open Object Explorer Details view
3. In this view select tables which have to be deleted (in this case all of them)
4. Press Delete until all tables are deleted (you repeat it as many times as amount of errors due to key constraints/dependencies)

edited Mar 12 '15 at 13:13

answered Apr 25 '14 at 17:09



Bronek

7,178 2 36 43

3 I could not get `sp_msforeachtable` to work on a Azure sql db. I'm guessing they don't include it for Azure. This solution works great and is perfect when mocking or making lots of changes (starting over) with EF migrations. – [trevorc](#) May 28 '15 at 13:01

Doesn't consider FKs/order. – [Josh](#) Mar 28 '16 at 17:37

1 this is a handy method if you just need to do it here and there, script may be better if you're doing it often. – [Dylan Hayes](#) Dec 22 '16 at 14:44

@Josh the order is not considered but if you keep pressing Ok in the Delete dialog it will keep on deleting all the tables it can, which will eventually delete all tables. – [clayRay](#) Mar 1 '17 at 5:52

Thank you -- you saved me hours of work! – [Missy](#) Sep 19 '17 at 15:23



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`delete` is used for deleting rows from a table. You should use `drop table` instead.

```
EXEC sp_msforeachtable 'drop table [?];'
```

edited Jun 23 '14 at 7:19

answered Dec 9 '11 at 0:35



DaveShaw

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- 1 I used this on a quick 2 tables with FK's and it worked. EXEC sp_msforeachtable 'ALTER TABLE ? NOCHECK CONSTRAINT all' – [DaveShaw](#) Dec 9 '11 at 0:47
- 10 This only worked for me after I removed the square brackets: EXEC sp_msforeachtable 'drop table ?'. – [LPains](#) Oct 22 '15 at 14:40
- On SQL Server you need the brackets if any table name has any odd characters or spaces. I've not known a version of SQL Server that didn't support brackets around object names. – [DaveShaw](#) Oct 22 '15 at 14:54
- On SQL Server 2012 (11.x) I also had to remove the square brackets. – [Frieder](#) Apr 2 at 13:42

25

```
/* Drop all Primary Key constraints */
```

```
DECLARE @name VARCHAR(128)
```

```
DECLARE @constraint VARCHAR(254)
```

```
DECLARE @SQL VARCHAR(254)
```

```
SELECT @name = (SELECT TOP 1 TABLE_NAME FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS WHERE  
constraint_catalog=DB_NAME() AND CONSTRAINT_TYPE = 'PRIMARY KEY' ORDER BY TABLE_NAME)
```

```
WHILE @name IS NOT NULL
```

```
BEGIN
```

```
    SELECT @constraint = (SELECT TOP 1 CONSTRAINT_NAME FROM  
INFORMATION_SCHEMA.TABLE_CONSTRAINTS WHERE constraint_catalog=DB_NAME() AND  
CONSTRAINT_TYPE = 'PRIMARY KEY' AND TABLE_NAME = @name ORDER BY CONSTRAINT_NAME)
```

```
    WHILE @constraint is not null
```

```
    BEGIN
```

```
        SELECT @SQL = 'ALTER TABLE [dbo].[ ' + RTRIM(@name) + ' ] DROP CONSTRAINT [ ' +  
RTRIM(@constraint) + ' ]'
```

```
        EXEC (@SQL)
```

```
        PRINT 'Dropped PK Constraint: ' + @constraint + ' on ' + @name
```

```
        SELECT @constraint = (SELECT TOP 1 CONSTRAINT_NAME FROM  
INFORMATION_SCHEMA.TABLE_CONSTRAINTS WHERE constraint_catalog=DB_NAME() AND  
CONSTRAINT_TYPE = 'PRIMARY KEY' AND CONSTRAINT_NAME <> @constraint AND TABLE_NAME =  
@name ORDER BY CONSTRAINT_NAME)
```

```
    END
```

```
SELECT @name = (SELECT TOP 1 TABLE_NAME FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS WHERE  
constraint_catalog=DB_NAME() AND CONSTRAINT_TYPE = 'PRIMARY KEY' ORDER BY TABLE_NAME)
```

```
END
```

```
GO
```

```
/* Drop all tables */
```

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```

WHILE @name IS NOT NULL
BEGIN
    SELECT @SQL = 'DROP TABLE [dbo].[ ' + RTRIM(@name) + ']'
    EXEC (@SQL)
    PRINT 'Dropped Table: ' + @name
    SELECT @name = (SELECT TOP 1 [name] FROM sysobjects WHERE [type] = 'U' AND category
= 0 AND [name] > @name ORDER BY [name])
END
GO

```

answered Feb 21 '13 at 8:49



Harpal

1,539 15 10

1 Works in SQL Azure :) sp_MSforeachtable doesn't work there – [Pavel Biryukov](#) May 18 '17 at 10:16

As a note, this will fail if you have non-dbo schemas (e.g. if you're using Hangfire) – [Liam Dawson](#) Sep 14 '17 at 0:43

In SSMS:

20

- Right click the database
- Go to "Tasks"
- Click "Generate Scripts"
- In the "Choose Objects" section, select "Script entire database and all database objects"
- In the "Set Scripting Options" section, click the "Advanced" button
- On "Script DROP and CREATE" switch "Script CREATE" to "Script DROP" and press OK
- Then, either save to file, clipboard, or new query window.
- Run script.

Now, this will drop everything, including the database. Make sure to remove the code for the items you don't want dropped. Alternatively, in the "Choose Objects" section, instead of selecting to script entire database, just select the items you want to remove.

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- 2 If you don't want to drop the database (which in my case I don't as I'd then need to make a support call to get it created) then use 'Select specific database objects' and select all the object types that you do wish to drop. – [d219](#) Jul 27 '18 at 22:38
- 1 This is the easiest way. – [Asiri Dissa](#) Dec 27 '18 at 6:14
- Perfect, thank you! – [user752746](#) Jan 3 at 23:17

▲ You are almost right, use instead:

17

EXEC sp_msforeachtable 'ALTER TABLE ? NOCHECK CONSTRAINT all'
EXEC sp_msforeachtable 'DROP TABLE ?'

but second line you might need to execute more then once until you stop getting error:

Could **not drop** object 'dbo.table' because it **is** referenced **by** a **FOREIGN KEY constraint**.

Message:

Command(s) completed successfully.

means that all table were successfully deleted.

answered Jan 8 '14 at 11:36



[Michał Powaga](#)

18.2k 6 42 59

This worked for me, thank you. – [J86](#) Jul 27 '17 at 8:23

The accented answer doesn't support Azure. It uses an undocumented stored procedure "sp_MSforeachtable". If you get an "azure

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This version ignores the entity framework migration history table "___MigrationHistory" and the "database_firewall_rules" which is an Azure table you will not have permission to delete.

Lightly tested on Azure. Do check to make this this has no undesired effects on your environment.

```
DECLARE @sql NVARCHAR(2000)

WHILE(EXISTS(SELECT 1 from INFORMATION_SCHEMA.TABLE_CONSTRAINTS WHERE
CONSTRAINT_TYPE='FOREIGN KEY'))
BEGIN
    SELECT TOP 1 @sql=('ALTER TABLE ' + TABLE_SCHEMA + '.[ ' + TABLE_NAME + ' ] DROP
CONSTRAINT [ ' + CONSTRAINT_NAME + ' ]')
    FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS
    WHERE CONSTRAINT_TYPE = 'FOREIGN KEY'
    EXEC(@sql)
    PRINT @sql
END

WHILE(EXISTS(SELECT * from INFORMATION_SCHEMA.TABLES WHERE TABLE_NAME !=
'___MigrationHistory' AND TABLE_NAME != 'database_firewall_rules'))
BEGIN
    SELECT TOP 1 @sql=('DROP TABLE ' + TABLE_SCHEMA + '.[ ' + TABLE_NAME + ' ]')
    FROM INFORMATION_SCHEMA.TABLES
    WHERE TABLE_NAME != '___MigrationHistory' AND TABLE_NAME != 'database_firewall_rules'
    EXEC(@sql)
    PRINT @sql
END
```

Taken from:

<https://edspencer.me.uk/2013/02/25/drop-all-tables-in-a-sql-server-database-azure-friendly/>

<http://www.sqlservercentral.com/blogs/sqlservertips/2011/10/11/remove-all-foreign-keys/>

edited Mar 30 '17 at 22:07

answered Mar 30 '17 at 21:44



CountZero

3,847 3 36 51

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14

```
USE YOUR_DATABASE_NAME
-- Disable all referential integrity constraints
EXEC sp_MSforeachtable 'ALTER TABLE ? NOCHECK CONSTRAINT ALL'
GO

-- Drop all PKs and FKs
declare @sql nvarchar(max)
SELECT @sql = STUFF((SELECT ';' + 'ALTER TABLE ' + Table_Name + ' drop constraint ' +
Constraint_Name from Information_Schema.CONSTRAINT_TABLE_USAGE ORDER BY Constraint_Name
FOR XML PATH(''),1,1, ''))
EXECUTE (@sql)
GO

-- Drop all tables
EXEC sp_MSforeachtable 'DROP TABLE ?'
GO
```

edited Feb 22 '17 at 2:45

answered Sep 16 '16 at 2:58



Richard J

1,433 14 13

2 I had to replace `sp_msforeachtable` by `sp_MSforeachtable` and would highly recommend to add a `use yourdatabase` as first line. Worked like a charm. – [Simon Sobisch](#) Jan 24 '17 at 15:04

This worked pretty well...thanks! – [daniness](#) Nov 14 '17 at 21:25

Short and sweet! Thnx. – [sapatelbaps](#) Feb 7 at 11:11

Seems the command should be without the square blanket

4

```
EXEC sp_msforeachtable 'drop table ?'
```

answered Jun 22 '16 at 6:57



Jimmy Wong

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3

--First delete all constraints

```
DECLARE @sql NVARCHAR(MAX);
SET @sql = N'';

SELECT @sql = @sql + N'
ALTER TABLE ' + QUOTENAME(s.name) + N'. '
+ QUOTENAME(t.name) + N' DROP CONSTRAINT '
+ QUOTENAME(c.name) + ';'
FROM sys.objects AS c
INNER JOIN sys.tables AS t
ON c.parent_object_id = t.[object_id]
INNER JOIN sys.schemas AS s
ON t.[schema_id] = s.[schema_id]
WHERE c.[type] IN ('D','C','F','PK','UQ')
ORDER BY c.[type];

EXEC sys.sp_executesql @sql;

-- Then drop all tables

exec sp_MSforeachtable 'DROP TABLE ?'
```

answered Jan 12 '18 at 17:08



Jeffrey

36 2

The fasted way is:

2

1. New Database Diagrams
2. Add all table
3. Ctrl + A to select all
4. Right Click "Remove from Database"
5. Ctrl + S to save

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How about dropping the entire database and then creating it again? This works for me.

1

```
DROP DATABASE mydb;  
CREATE DATABASE mydb;
```

answered Aug 4 '15 at 9:50

**Chong Lip Phang**

3,559 4 39 49

Don't you need to blast the mdf & ldf files in between? – [ruffin](#) Aug 27 '15 at 14:41

I am using a web host provider and I am not too sure about that. I think those files will be deleted automatically when you drop a database, unless you are offline. – [Chong Lip Phang](#) Aug 28 '15 at 5:17

2 Because the database may have store procedures, special configuration, etc.. – [Dendory](#) Nov 12 '15 at 15:58

2 It really depends on the circumstances. In my case, I don't have stored procedures and this method works fine for me. I am not going to write complex codes that span dozens of lines when two lines will do. I don't think my answer justifies a downvote as I am offering a suggestion to a specific group of users. – [Chong Lip Phang](#) Nov 13 '15 at 11:20

I know this is an old post now but I have tried all the answers on here on a multitude of databases and I have found they all work sometimes but not all of the time for various (I can only assume) quirks of SQL Server.

0

Eventually I came up with this. I have tested this everywhere (generally speaking) I can and it works (without any hidden store procedures).

For note mostly on SQL Server 2014. (but most of the other versions I tried it also seems to worked fine).

I have tried while loops and nulls etc etc, cursors and various other forms but they always seem to fail on some databases but not others for no obvious reason.

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```
SET ANSI_NULLS ON
GO

SET QUOTED_IDENTIFIER ON
GO

-- Drop all referential integrity constraints --
-- Drop all Primary Key constraints.          --

DECLARE @sql NVARCHAR(296)
DECLARE @table_name VARCHAR(128)

DECLARE @constraint_name VARCHAR(128)
SET @constraint_name = ''

DECLARE @row_number INT

SELECT @row_number = Count(*) FROM INFORMATION_SCHEMA.REFERENTIAL_CONSTRAINTS rc1
LEFT JOIN INFORMATION_SCHEMA.TABLE_CONSTRAINTS tc2 ON tc2.CONSTRAINT_NAME =
rc1.CONSTRAINT_NAME

WHILE @row_number > 0
BEGIN
    BEGIN
        SELECT TOP 1 @table_name = tc2.TABLE_NAME, @constraint_name =
rc1.CONSTRAINT_NAME FROM INFORMATION_SCHEMA.REFERENTIAL_CONSTRAINTS rc1
        LEFT JOIN INFORMATION_SCHEMA.TABLE_CONSTRAINTS tc2 ON tc2.CONSTRAINT_NAME =
rc1.CONSTRAINT_NAME
        AND rc1.CONSTRAINT_NAME > @constraint_name
        ORDER BY rc1.CONSTRAINT_NAME
        SELECT @sql = 'ALTER TABLE [dbo].[ ' + RTRIM(@table_name) + ' ] DROP CONSTRAINT [ '
+ RTRIM(@constraint_name) + ' ]'
        EXEC (@sql)
        PRINT 'Dropped Constraint: ' + @constraint_name + ' on ' + @table_name
        SET @row_number = @row_number - 1
    END
END
GO

-- Drop all tables --

DECLARE @sql NVARCHAR(156)
DECLARE @name VARCHAR(128)
```

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```
WHILE @row_number > 0
BEGIN
    SELECT @name = (SELECT TOP 1 [name] FROM sysobjects WHERE [type] = 'U' AND category
= 0 AND [name] > @name ORDER BY [name])
    SELECT @sql = 'DROP TABLE [dbo].[' + RTRIM(@name) + ']'
    EXEC (@sql)
    PRINT 'Dropped Table: ' + @name
    SET @row_number = @row_number - 1
END
GO
```

answered Dec 24 '17 at 1:05



William Humphreys

706 1 8 28

If you want to **drop all tables**, you can as well drop the database and then create a fresh one.

0

T-SQL:

```
DROP DATABASE Northwind
GO
CREATE DATABASE Northwind
GO
```

To achieve that in **SQL Management Studio (SSMS, in my case v 17.9.1)**:

1. Right-click on the database you want to delete, e.g. "Northwind";
Select **"Delete"** in the context menu
2. Right-click on **"Databases"** (folder icon);
Select **"New Database..."**
3. Type in the **database name**, e.g. "Northwind";
Click **OK**

And you're done! You have a fresh database without any tables in it. The advantage of this approach is, you don't need to take care

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Remember to backup your database **before** you do that! If you just need some SPs or views, save them as script before you re-create the database, edit them so they'll work with the new tables and add them later.

edited Feb 8 at 8:23

answered Feb 4 at 16:19



Matt

16.7k

7

77

120

Database is not just "sum of all tables", there is lot of other things like users, permissions, stored procedures etc. Dropping entire DB could wipe all that things as well (which can be not the way one could wish). – Yury Schkatula Apr 24 at 14:38

@Yury Schkatula - you are absolutely right! I was assuming that who wants to remove a database completely has a script at hand that recreates it properly - with all the functions, SPs, roles, permissions and users. Or wants to restore from a backup and just intends to do a fresh start. – Matt Apr 24 at 14:45

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