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

__ G

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?



USE [dbname]

erver sql-server-2008

ssms

sp-msforeachtable

edited Nov 21 '17 at 7:02



Arulkumar

0.9k 12 37 5

asked Dec 9 '11 at 0:30



763 2 6

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
G0
EXEC sp MSforeachtable 'DROP TABLE ?'
GO
```

You can find the post <u>here</u>. It is the post by Groker.



answered Dec 9 '11 at 0:53



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
- 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. Ogglas 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)

258

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



7,178 2 36 4

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



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

32

EXEC sp msforeachtable 'drop table [?]'



edited Jun 23 '14 at 7:19

answered Dec 9 '11 at 0:35



DaveShaw

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- 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



DECLARE @name VARCHAR(128)

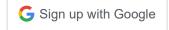
```
DECLARE @constraint VARCHAR(254)
DECLARE @SQL VARCHAR(254)
```

/* Drop all Primary Key constraints */

```
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
```

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/* D.--- -!! +-b!-- */

```
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



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:



- 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,

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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:



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.

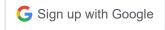


This worked for me, thank you. – J86 Jul 27 '17 at 8:23

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.sglservercentral.com/blogs/sglservertips/2011/10/11/remove-all-foreign-keys/

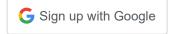
edited Mar 30 '17 at 22:07

answered Mar 30 '17 at 21:44



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14

GO

```
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 ?'
```

edited Feb 22 '17 at 2:45

answered Sep 16 '16 at 2:58



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



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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





The fasted way is:



- 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.



DROP DATABASE mydb;
CREATE DATABASE mydb;

answered Aug 4 '15 at 9:50



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
- 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.





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
G0
SET QUOTED IDENTIFIER ON
G0
-- 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
G0
-- 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





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
- Right-click on "Databases" (folder icon);Select "New Database..."
- 3. Type in the **database name**, e.g. "Northwind"; Click **OK**

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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



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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