



TIPS, TRICKS, HACKS & BACKDOORS

Jared Kirkpatrick

Principle Consultant @ MMIBC

✉ kirk1880@me.com

ABOUT ME

Principle Consultant @ MMIBC

Member of PASS since 1999

Presenter for several SQL Saturdays

5 X 140.6 Ironman Finisher | 21 X 70.3

12 Gran Fondo / 100 Mile Bike Race



PUZZLES FOR TODAY



TIPS

Dynamic SQL
Number Tables

TRICKS

Randomization
Delimiter Splits

HACKS

Delete Dups
Sp_executeSQL

BACKDOORS

Read/Write to the Registry



TIP #1 : DYNAMIC SQL

Problem: Create a Column List quickly from a Table with several columns.

Solution: Concatenate a string from the source meta data.

The background of the slide is a classic Star Wars movie poster illustration. It features a large, translucent blue helmet of Darth Vader on the left. In the center, Luke Skywalker in his white Jedi robes is leaping forward, holding a glowing yellow lightsaber aloft. To his right, Princess Leia in a white gown is running. In the lower left, R2-D2 and C-3PO are visible. The background is a deep space scene with a starry sky, a Death Star in the upper left, and a fleet of TIE fighters in the distance. The ground below is a dark, rocky planet surface with some structures in the distance.

STAR
WARS


```

DECLARE @v_SQL [NVARCHAR] (MAX) = ''
        ,@v_TBL [SYSNAME] = 'Dim_Server'
        ,@v_Max [INT];

SELECT @v_Max = MAX(ORDINAL_POSITION)
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = @v_TBL;

SELECT @v_SQL = @v_SQL + '[' + COLUMN_NAME + ']' +
CASE WHEN ORDINAL_POSITION = @v_Max
THEN ''
ELSE ', '
END
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = @v_TBL;

```





DEMO

TRICK #1 : RANDOMIZATION

Problem: Create a Random Data Set.

Solution: Manipulate the ORDER BY
Clause.

A classic Star Wars movie poster illustration. In the foreground, Luke Skywalker in his white Jedi robes holds a glowing lightsaber aloft. Beside him, Princess Leia in a white gown holds a blaster. To the left, R2-D2 and C-3PO are visible. The background features a large, translucent blue helmet of Darth Vader, a Death Star in the sky, and a fleet of TIE fighters attacking a planet. The Star Wars logo is in the bottom right corner.

STAR
WARS


```
SELECT TOP 5 [Card]  
  FROM [CardDeck]  
 ORDER BY NEWID();
```

A vertical strip of Star Wars movie poster artwork on the right side of the slide. It features Luke Skywalker in his white Jedi robes, holding a glowing lightsaber high above his head. Beside him is Princess Leia, also in her iconic white dress, holding a blaster. They are standing on a rocky, desert-like planet surface. In the background, the large, blue, metallic head of Darth Vader looms over them against a starry night sky.

STAR
WARS

DEMO

A vibrant Star Wars-themed illustration serves as the background. It features a large, translucent blue helmet of Darth Vader on the left. In the center, Luke Skywalker in his white Jedi robes holds a glowing yellow lightsaber aloft. Beside him, Princess Leia in a white dress holds a blaster. To the left, R2-D2 and C-3PO are visible. The background is a deep blue space filled with stars, a Death Star in the upper left, and a fleet of TIE fighters in the distance. The ground is a dark, rocky landscape with some structures in the distance.

HACK #1 :

DELETE DUPLICATES

Problem: We have a table with no Unique Key and currently 4 identical duplicate records and we need to remove 3.

Solution: Delete through a CTE.

STAR
WARS


```
WITH CTE_delete AS
(
    SELECT RN = ROW_NUMBER() OVER(PARTITION BY [Dim_Server_ID]
                                     ORDER BY (SELECT NULL))
    FROM [dbo].[DemoServer]
)
DELETE FROM CTE_delete
WHERE RN > 1;
```



DEMO

A vibrant Star Wars-themed illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over a scene on a rocky planet. Luke Skywalker, in his white Jedi robes, stands with his arms raised, holding a glowing yellow lightsaber. Beside him, Princess Leia, also in white, holds a blaster. In the lower-left corner, the droids R2-D2 and C-3PO are visible. The sky is filled with a fleet of Rebel X-wing fighters, their blue hulls and yellow engines contrasting against the dark space. In the upper right, the Death Star is partially visible. The overall color palette is dominated by blues, yellows, and oranges, creating a classic cinematic feel.

BACK DOOR #1:

READ FROM THE WINDOWS REGISTRY

Problem: We need to programmatically get the "True" Domain of the SQL Server Instance we are currently logged into.

Extended Problem: We think the company is using aliases.

Solution: Grab the "True" Domain name from the Windows Registry (Since we cannot use xp_cmdshell).

STAR WARS


```
DECLARE @v_Domain [NVARCHAR](100);
```

```
EXEC [master].[dbo].[xp_regread]  
    @rootkey          = 'HKEY_LOCAL_MACHINE'  
    ,@key              = 'SYSTEM\ControlSet001\Services\Tcpip\Parameters\  
    ,@value_name       = 'Domain'  
    ,@value            = @v_Domain OUTPUT;
```

```
SELECT @v_Domain      AS [@Domain];
```



STAR WARS



DEMO

A vibrant Star Wars-themed illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over a scene on a rocky planet surface. Luke Skywalker, in his white Jedi robes, stands with his arms raised, holding a glowing yellow lightsaber. Beside him, Princess Leia, also in white, holds a blaster. In the lower-left corner, the droids R2-D2 and C-3PO are visible. The background is a deep space scene filled with stars, a large blue planet, the Death Star, and a fleet of Rebel X-wing fighters engaged in battle with Imperial TIE fighters.

TIP #2 : USE A NUMBERS TABLE TO PARSE A STRING

Problem: We have a comma delimited list of numbers that need to be separated into separate rows in a result set.

Solution: Use a numbers table to return a result set of parsed strings

STAR WARS


```
DECLARE @v_a [NVARCHAR](255);

SELECT @v_a = '1,3,5,7,9,14,36,395';

SELECT [Number]
FROM [dbo].[Numbers]
WHERE CHARINDEX(',', CONVERT([NVARCHAR](12), [Number]) + ',',
    ',' + @v_a + ',') > 0
ORDER BY [Number];
```





DEMO

A vibrant Star Wars-themed illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over a scene where Luke Skywalker, in his white Jedi robes, holds a glowing yellow lightsaber aloft. Beside him, Princess Leia, also in white, holds a blaster. In the lower-left corner, the droids R2-D2 and C-3PO are visible. The background is a deep space scene with a starry sky, a large blue planet, and a fleet of Rebel starfighters engaged in a battle with Imperial forces, with explosions and laser fire visible. The overall color palette is dominated by blues, yellows, and oranges.

TRICK #2 :

FOR XML CROSS APPLY

TO RETURN A DELIMITED

RESULT SET

Problem: We have strings in our data that need to be rolled out so that we can have non-overloaded data in our result sets.

Solution: Use for XML with a cross apply to return a non overloaded data result set.

STAR WARS


```
/* Select the data out using XML CROSS APPLY */
```

```
SELECT a.[xmldemo_id]  
      ,a.[Value]  
      ,b.[SplitData]  
FROM (SELECT *  
      ,CAST('<X>' + REPLACE([Value],  
      ',','</X><X>') + '</X>' AS XML)  
FROM #xmldemo)  
CROSS APPLY (SELECT aValue.X.value('.', 'VARCHAR(50)')  
      FROM a.[xmlfilter].nodes('X'))
```

```
AS xmlfilter
```

```
AS [SplitData] a  
AS aValue(X) b;
```

A vertical strip on the right side of the slide features a scene from Star Wars: The Force Awakens. It shows Rey (Daisy Ridley) in her white Jedi robes, holding a glowing yellow lightsaber high above her head. Beside her, Finn (John Boyega) is also in white robes, looking up at the lightsaber. In the background, the large, blue, metallic head of the First Order Supreme Leader Kylo Ren looms against a starry space background. The Star Wars logo is at the bottom of this strip.

STAR
WARS



DEMO

A vibrant Star Wars-themed illustration serves as the background. It features a large, translucent blue helmet of Darth Vader on the left. In the center, Luke Skywalker in his white Jedi robes holds a glowing yellow lightsaber aloft. Beside him, Princess Leia in a white dress holds a blaster. To the left, R2-D2 and C-3PO are visible. The background is a deep blue space filled with stars, a Death Star in the upper left, and a fleet of TIE fighters with orange engine flames. The foreground shows a dark, rocky landscape with a cityscape in the distance.

HACK #2 :

SP_EXECUTESQL

USING OUTPUT PARAMETERS

Problem: Need to return the total of different orders.

Solution: Use dynamic SQL passing in input and output parameters.

**STAR
WARS**


```
SELECT @v_SQL = N'  
    SELECT @d_TotalPrice = SUM([Cost]) OVER(PARTITION BY [Order])  
    FROM [OrderItems]  
    WHERE [Order] = @d_Order  
    ORDER BY [Order]  
    OFFSET 0 ROWS FETCH FIRST 1 ROW ONLY;';  
  
EXEC sp_executesql  
    @stmt = @v_SQL  
    ,@params = N'@d_Order AS SYSNAME, @d_TotalPrice AS FLOAT OUT'  
    ,@d_Order = @v_Order -- Input param  
    ,@d_TotalPrice = @v_Total OUTPUT; -- output param
```



STAR
WARS

DEMO

BACK DOOR #2: XP_REGWRITE

Problem: We want to cause Chaos and get fired from our current position.

Solution: xp_regwrite will make that happen post haste.

A classic Star Wars movie poster illustration. In the foreground, Luke Skywalker in his white Jedi robes holds a glowing lightsaber aloft. Beside him, Princess Leia in a white gown holds a blaster. To the left, R2-D2 and C-3PO stand on a rocky, desert-like planet surface. In the background, the Death Star looms in the dark, star-filled sky. A fleet of Rebel X-wing fighters is engaged in a dogfight with Imperial TIE fighters. The Star Wars logo is in the bottom right corner.

STAR
WARS


```
EXEC [master].[dbo].[xp_regWrite]
    @rootkey      = 'HKEY_LOCAL_MACHINE'
    ,@key          = 'SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System\'
    ,@value_name   = 'legalnoticecaption'
    ,@type         = 'REG_SZ'
    ,@value        = 'WARNING!!!';

EXEC [master].[dbo].[xp_regWrite]
    @rootkey      = 'HKEY_LOCAL_MACHINE'
    ,@key          = 'SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System\'
    ,@value_name   = 'legalnoticetext'
    ,@type         = 'REG_SZ'
    ,@value        = 'You are about to release the CLEAR LETHAL ODORLESS GAS...RUN
AWAY!!!!!!!!';
```



STAR
WARS



DEMO

WARNING!!!

**You are about to release the CLEAN LETHAL ODORLESS
GAS...RUN AWAY!!!!!!**

OK



We swim with sharks



OB Catch

