tSQLt
Unit Test for SQL Databases

Arguments

- 1.- Testing will improve
- 2.- Deployment frequency will go up
- 3.- Improve response to business needs
- 4.- More time for experimentation
- 5.- Stable releases

UnitTest

o TestSchema

o objectName starting with "test "

Parts Inside UT

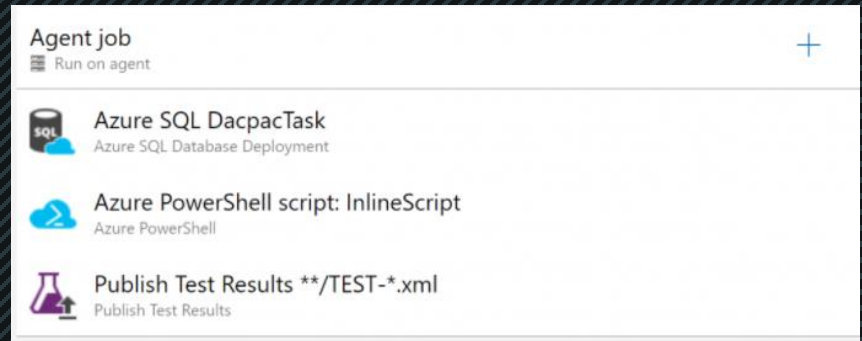o Assemble

o ActPart

o Assert

What basic test are being generated by PS function

o Object Existence

o Database Collation

o Function Parameters

o Procedure Parameters

o Table Columns

o Table Constraints

o Index Columns

o View Columns

Demo

DepOps

1. Create a project

2. Setup build pipeline

3. Run tests

```
1   $connectionString = "<ADD YOUR CONNECTION STRING HERE>"
2   $sqlCommand = @"
3   BEGIN TRY
4   EXEC tSQLt.RunAll
5   END TRY
6   BEGIN CATCH
7   END CATCH;
8   EXEC tSQLt.XmlResultFormatter
9   "@
10
11  $connection = new-object system.data.SqlClient.SQLConnection($connectionString)
12  $command = new-object system.data.sqlclient.sqlcommand($sqlCommand,$connection)
13  $connection.Open()
14
15  $adapter = New-Object System.Data.sqlclient.sqlDataAdapter $command
16  $dataset = New-Object System.Data.DataSet
17  $adapter.Fill($dataSet) | Out-Null
18
19  $connection.Close()
20  $dataSet.Tables[0].Rows[0].ItemArray[0] | Out-File "$(System.DefaultWorkingDirectory)/drop/sql-database/TEST-$(DatabaseName).xml"
```

https://nikolaithomassen.com/2019/02/26/azure-sql-unit-testing-with-tsqlt-using-azure-devops/

Demo

Thank you

Q & A

Links

1. tSQLt
   https://tsqlt.org/

2. PSModuleDevelopment – Create Project using Template
   https://psframework.org/

3. Demo Code & Slides
   https://github.com/antonio-bravo/CoP

4. PStSQLtTestGenerator
   https://github.com/sanderstad/PStSQLtTestGenerator

5. SSDT Template
   https://github.com/sanderstad/SSDT-With-tSQLt-Template