

IT-Tage 2015

Schwerpunkt: Datenbanken
14.12. - 18.12.2015
Frankfurt am Main

William Durkin:
SQL Server 2016 -
Warum soll ich mir das antun?

Wer ist William Durkin?

SQL Server Consultant

10+ Jahre SQL Server

Engländer, seit 2002 in Deutschland

Gründer [Emsland SQL User Group](#)



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SQL Server 2016

Warum soll ich mir das antun?

„If it ain't broke, don't fix it!“

-Unknown

SQL 2016: Warum soll ich mir das antun?

SQL 2016 : Release ????

[CTP 3.0](#) in Oktober veröffentlicht

SQL 2005 : [End Of Life: April 12 2016](#)

Momentan nur „Extended Support“

SUBJECT :

DYNAMIC DATA MASKING



```

25
26 CREATE TABLE dbo.MaskedTable
27 (
28     Col1 INT NOT NULL PRIMARY KEY CLUSTERED,
29     Col2 VARCHAR(255) MASKED WITH (FUNCTION = 'default()'),
30     Col3 VARCHAR(255) MASKED WITH (FUNCTION = 'email()'),
31     Col4 INT          MASKED WITH (FUNCTION = 'default()'),
32     Col5 VARCHAR(255) MASKED WITH (FUNCTION = 'partial(5,"XXXXXXX",0)')
33 );
34 INSERT INTO dbo.MaskedTable
35     ( Col1, Col2, Col3, Col4, Col5 )
36 VALUES ( 1, 'Testdata for DDM', 'Test@Test.com', 100, 'More test data' ),
37         ( 2, 'IT Tage Frankfurt 2015', 'office@informatik-aktuell.de' , 200 , 'pool on the roof must have a leak' );
38
39 -- SELECT als Tabellenbesitzer = Ich darf die Daten sehen
40 SELECT USER_NAME() AS WerBinIch,*
41 FROM    dbo.MaskedTable
42 GO
43
44 -- SELECT als "TestUser" = Ich darf die Daten *nicht* sehen
45 EXECUTE AS USER = 'ZeroCool'
46 SELECT USER_NAME() AS WerBinIch, *
47 FROM    dbo.MaskedTable
48 REVERT

```

100 %

Results Messages

| | WerBinIch | Col1 | Col2 | Col3 | Col4 | Col5 |
|---|-----------|------|------------------------|------------------------------|------|-----------------------------------|
| 1 | dbo | 1 | Testdata for DDM | Test@Test.com | 100 | More test data |
| 2 | dbo | 2 | IT Tage Frankfurt 2015 | office@informatik-aktuell.de | 200 | pool on the roof must have a leak |

| | WerBinIch | Col1 | Col2 | Col3 | Col4 | Col5 |
|---|-----------|------|------|---------------|------|---------------|
| 1 | ZeroCool | 1 | xxxx | TXXX@XXXX.com | 0 | More XXXXXXXX |
| 2 | ZeroCool | 2 | xxxx | oXXX@XXXX.com | 0 | pool XXXXXXXX |

Dynamic Data Masking

```
CREATE TABLE dbo.MaskedTable
(
  Col1 INT NOT NULL PRIMARY KEY CLUSTERED,
  Col2 VARCHAR(255) MASKED WITH (FUNCTION = 'default()'),
  Col3 VARCHAR(255) MASKED WITH (FUNCTION = 'email()'),
  Col4 INT MASKED WITH (FUNCTION = 'default()'),
  Col5 VARCHAR(255) MASKED WITH (FUNCTION = 'partial(5,"XXXXXXXX",0)')
);
```


Dynamic Data Masking

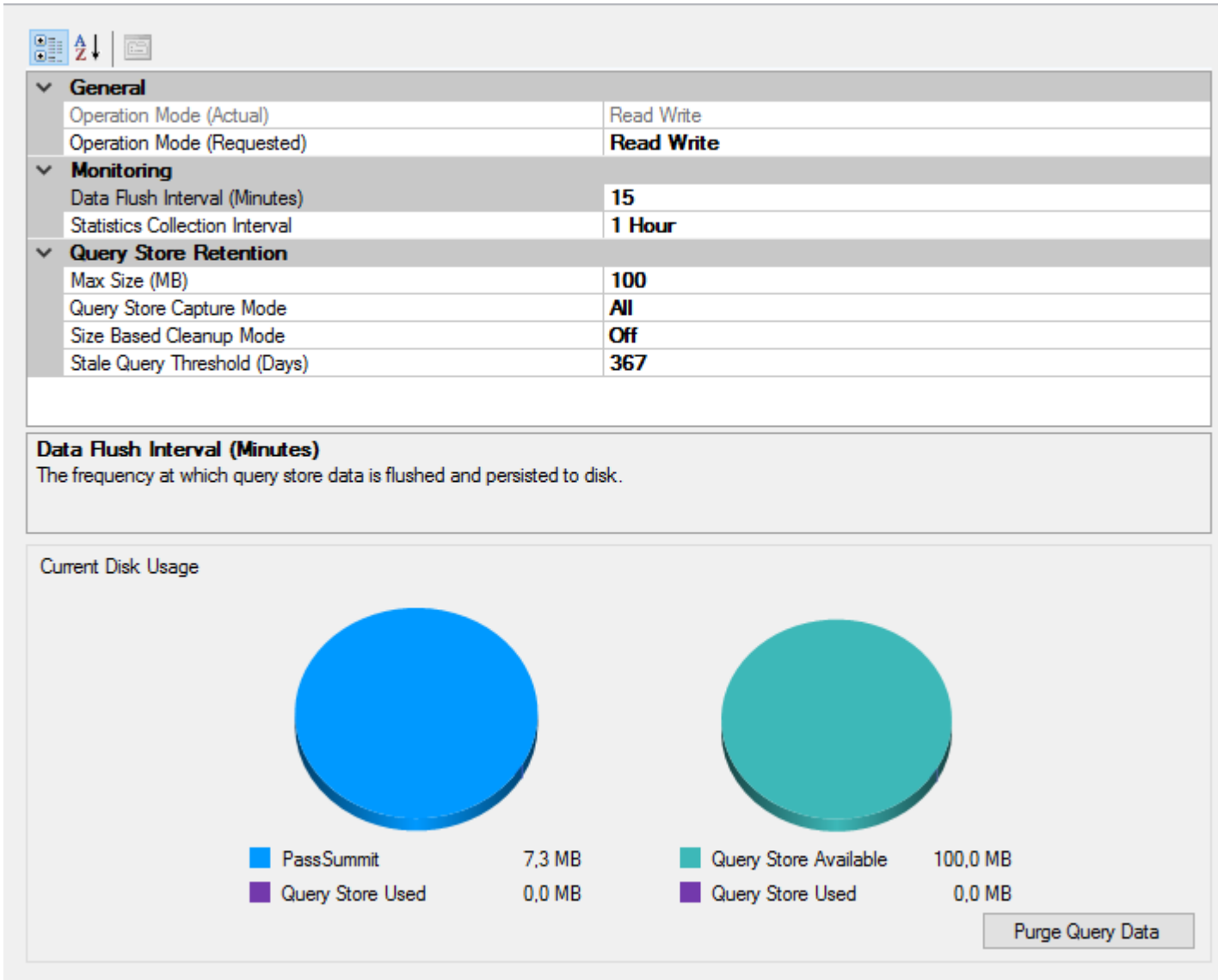
| Col1 | Col2 | Col3 | Col4 | Col5 |
|------|------------------------|------------------------------|------|-----------------------------------|
| 1 | Testdata for DDM | Test@Test.com | 100 | More test data |
| 2 | IT Tage Frankfurt 2015 | office@informatik-aktuell.de | 200 | pool on the roof must have a leak |

| Col1 | Col2 | Col3 | Col4 | Col5 |
|------|------|---------------|------|---------------|
| 1 | XXXX | TXXX@XXXX.com | 0 | More XXXXXXXX |
| 2 | XXXX | oXXX@XXXX.com | 0 | pool XXXXXXXX |



QUERY STORE

Query Store



General

| | |
|----------------------------|-------------------|
| Operation Mode (Actual) | Read Write |
| Operation Mode (Requested) | Read Write |

Monitoring

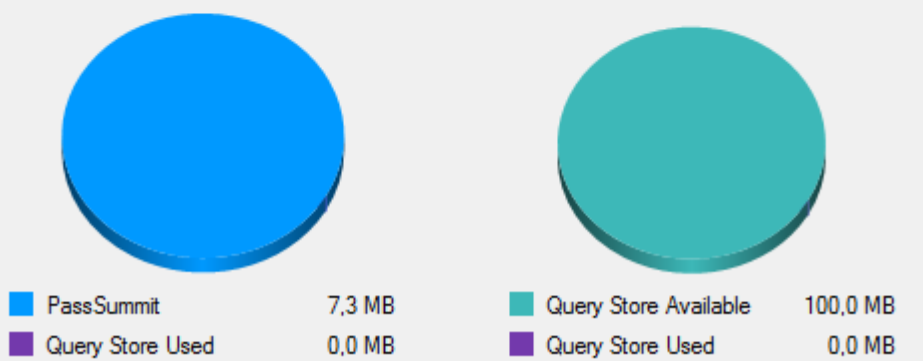
| | |
|--------------------------------|--------|
| Data Flush Interval (Minutes) | 15 |
| Statistics Collection Interval | 1 Hour |

Query Store Retention

| | |
|------------------------------|-----|
| Max Size (MB) | 100 |
| Query Store Capture Mode | All |
| Size Based Cleanup Mode | Off |
| Stale Query Threshold (Days) | 367 |

Data Flush Interval (Minutes)
The frequency at which query store data is flushed and persisted to disk.

Current Disk Usage



| | | | |
|------------------|--------|-----------------------|----------|
| PassSummit | 7.3 MB | Query Store Available | 100.0 MB |
| Query Store Used | 0.0 MB | Query Store Used | 0.0 MB |

Purge Query Data

- [-] Query Store
 - ✓ Regressed Queries
 - ✓ Overall Resource Consumption
 - ✓ Top Resource Consuming Queries
 - ✓ Tracked Queries

Query Store

Top 25 regressed queries during the last hour for database PassSummit

Metric: Duration (µs) | Statistic: Total

additional duration workload

query id

Plan summary for query 8

Avg

plan id 8

Force Plan | Unforce Plan

Plan 8 [not forced]

Query 1: Query cost (relative to the batch): 100%
SELECT actual_state FROM sys.database_query_store_options

SELECT Cost: 0 % | Table Valued Function [QUERY_STORE_OPTIONS] Cost: 100 %

Confirmation

Do you want to force plan 8 for query 8?

Yes | No

1

2

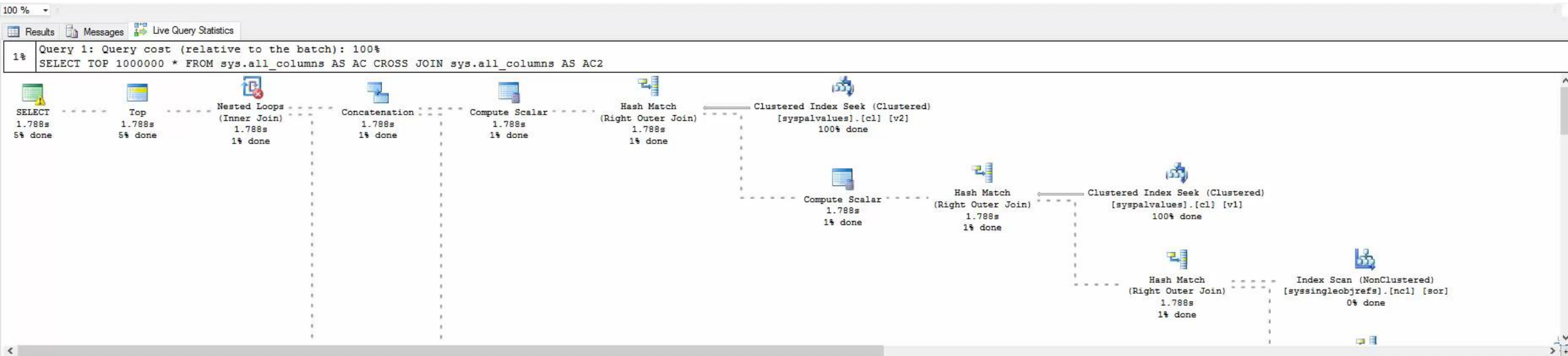
3

4

LIVE QUERY STATISTICS



Live Query Statistics



Was gibt es noch?

Reporting Services Update

TRUNCATE TABLE auf Partition-Ebene

Row Level Security: Funktionsgesteuerte Security auf Reienebene

Stretch Database – automatisches verschieben von „alten“ Daten in Azure

Load Balanced Read-only in Availability Groups

Ressourcen

[Neuigkeiten in SQL 2016](#)

[SQL 2016 CTP3.0](#)

[SQL Conference](#)

FRAGEN?



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