

The Query Store and SQL Tuning

Grant Fritchey – Red Gate Software

Goal

- ① Understand the information and mechanisms behind the Query Store
- ① Learn how to work with and maintain the Query Store
- ① Discover new opportunities and mechanisms for dealing with query performance tuning issues

Get in touch



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FLIGHT
RECORDER
DO NOT
OPEN

MONITOR
600 OHMS



TEST

- 1
- 2
- 3
- 4

ALL

FAIRCHILD
INDUSTRIAL PRODUCTS
PLAINVIEW NEW YORK
COCKPIT VOICE RECORDER
MODEL NO. 4100 SER. 2664
WT. 5 LBS. POWER 17 WATTS
ENV. CAT. 1 SPEC. 1
TSO C84 ARINC 357 DATE 5/53

- FAIRCHILD MODIFICATIONS
- | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

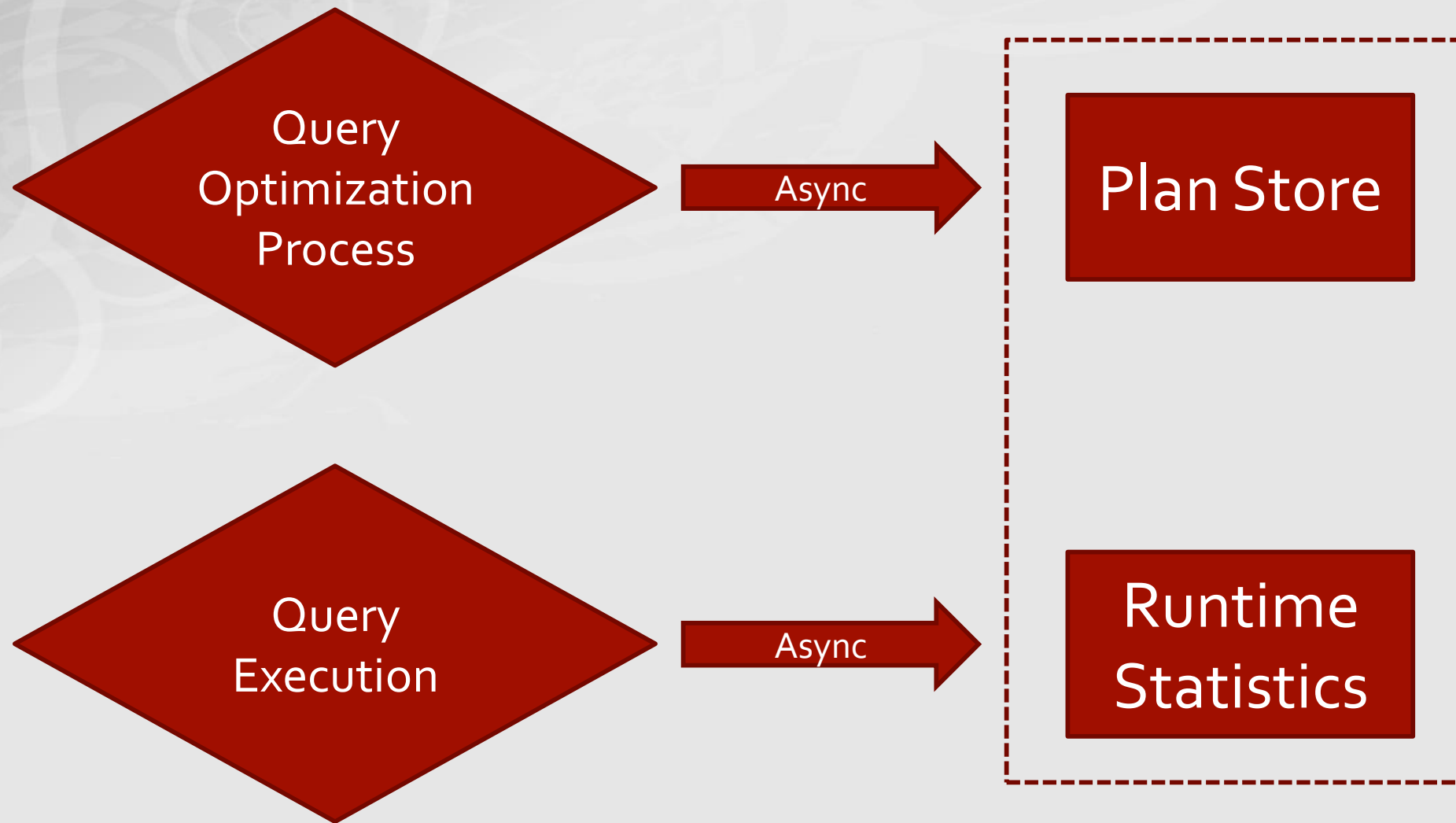
FLIGHT DATA
RECORDER



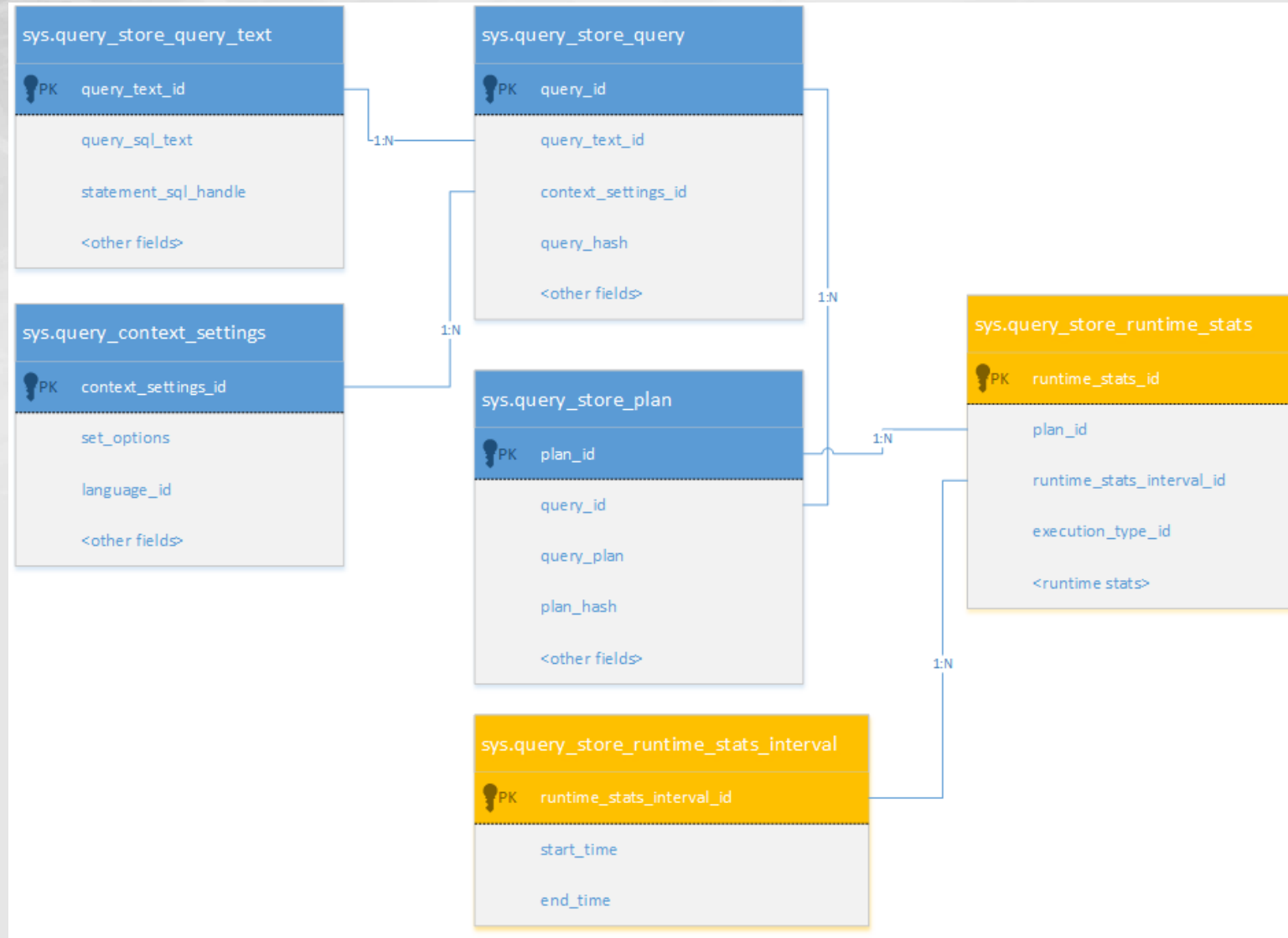
Query Store



Query Store



Query Store Data



Query Store Lives



SQL Server 2016



Azure SQL
Database



2014?

You control...

Turn it on or Off

Time to flush to disk

Size of storage

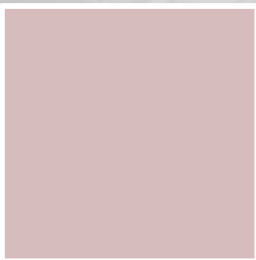
Days in storage

Plans per query limit

Automatic cleanup

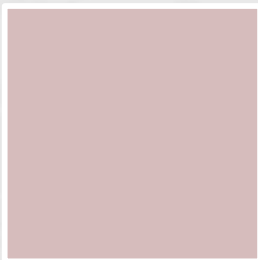
Capture Mode

Aggregation Interval Length



Queries

- Execution count
- Duration
- CPU
- Compile



Execution Plans

- Estimated Plan
- More than one per query

Monitoring

Extended
Events

Wait
Statistics

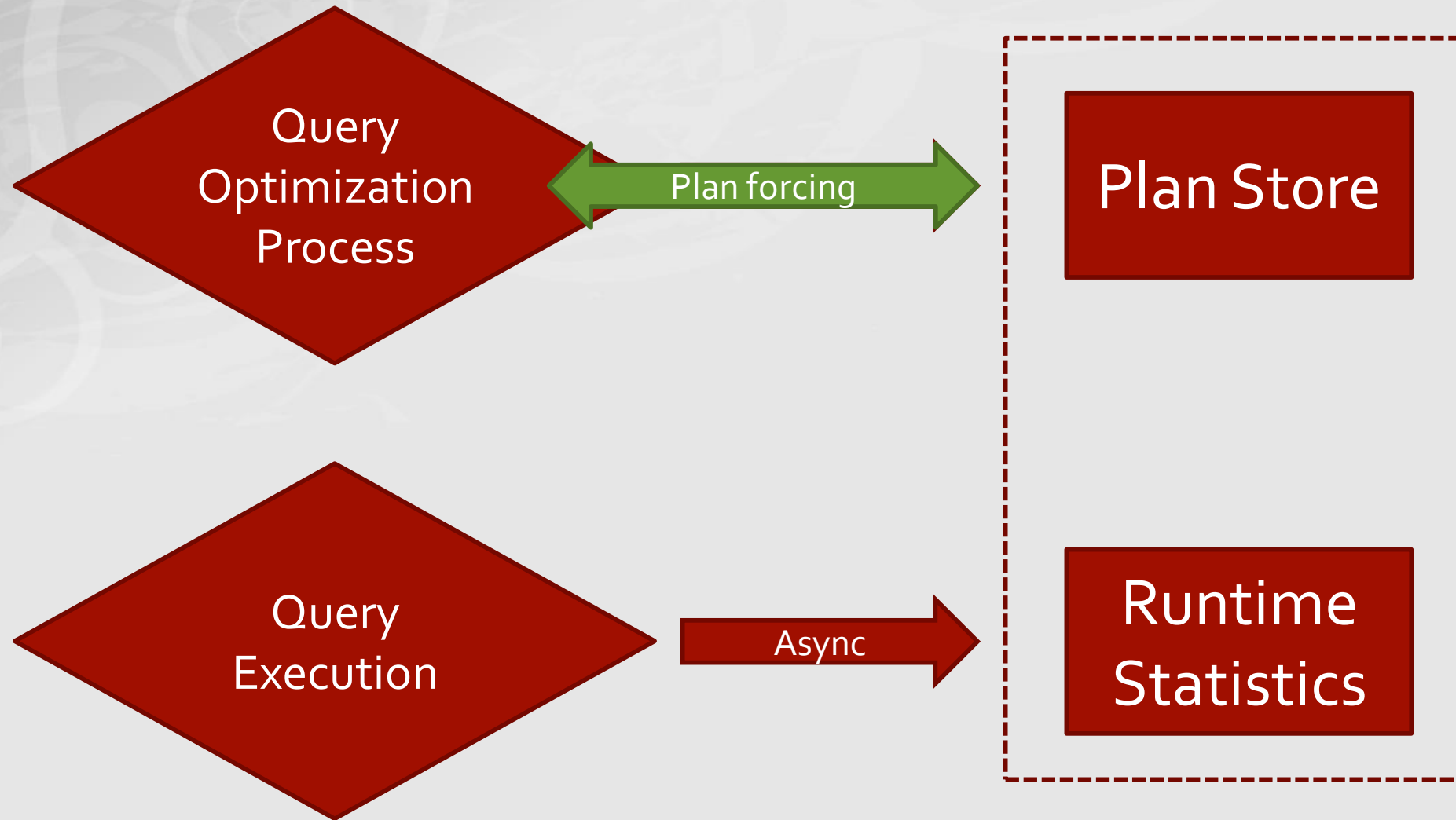
In-Memory OLTP

Exactly the same

Except

- Not persisted
- **sys.sp_xtp_control_query_exec_stats**
- Plan forcing can fail
- No memory grants
- Need to recompile to capture metrics

Plan Forcing



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Questions?

How would you...?

What happens when...?

Why does...?

When do I...?

Photo Credits

- ⦿ Meteor
- ⦿ London
- ⦿ Flight data recorder
- ⦿ Undo button