

Understanding Plan Guides and Query Hints



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Overview



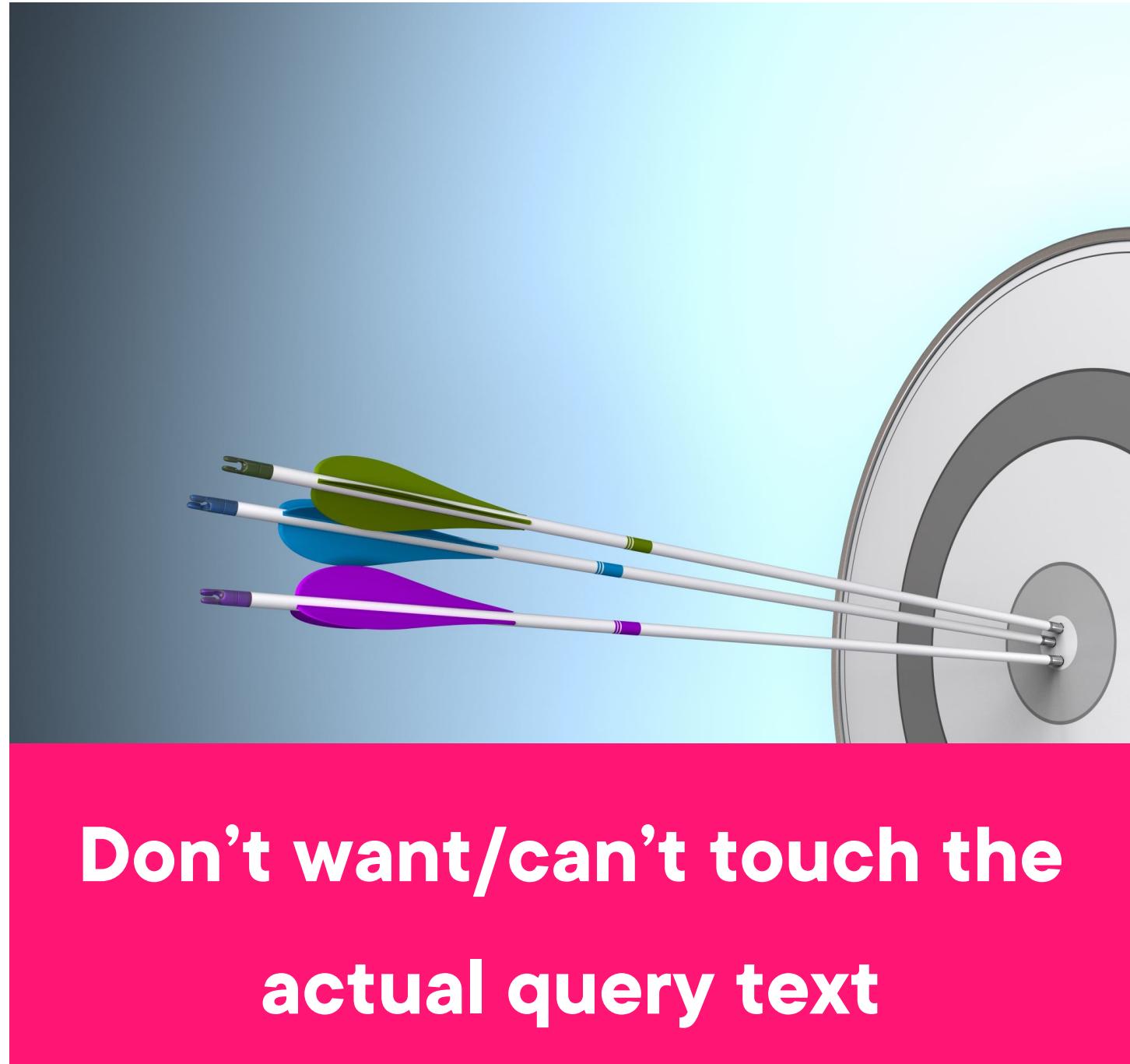
Plan guide when you don't want/can't change the actual query text

Optimize bad parameter sniffing

- OPTIMIZE FOR hint



Plan Guides in a Nutshell



Don't want/can't touch the
actual query text

- ✓ Attaching query hints or a fixed query plan
- ✓ Small subset of queries not performing



OBJECT Plan Guide

Queries executed as **stored procedures** and **functions**

```
/*Create a sproc*/
CREATE PROCEDURE Get_Product_SalesAmt
@ProductKey int
AS
SELECT SalesOrderNumber
, SalesAmount
, productKey
FROM dbo.FactOnlineSales
WHERE ProductKey = @ProductKey;

/*Run sproc*/
EXECUTE Get_Product_SalesAmt @ProductKey = 1827
```

```
/*Create a plan guide*/
sp_create_plan_guide
@name = N'Guide_PS',
@stmt = N'SELECT SalesOrderNumber
, SalesAmount
, productKey
FROM dbo.FactOnlineSales
WHERE ProductKey = @ProductKey;',
@type = N'OBJECT',
@module_or_batch = N'dbo.Get_Product_SalesAmt',
@params = NULL,
@hints = N'OPTION (OPTIMIZE FOR (@ProductKey = ''176'))';
```



SQL and TEMPLATE Plan Guides



SQL



TEMPLATE

- ✓ **Matches queries executed as stand-alone T-SQL statements**
- ✓ **Override the current PARAMETERIZATION database SET option**



Plan guides should be an exception, rather than a rule!



Demo



Query hints to optimize bad “sniffing”

- Double-edged sword
- You’re taking over the responsibility



Summary



Setting the right expectations

- What is a “good enough” performance?

Execution plan is the “blood test” and you are the doctor

Plans reused from the cache

As few indexes as possible, to be referenced by as many queries as possible

Updated statistics help the optimizer to generate the optimal plan

Parameter sniffing in action

- Query hints and plan guides

