



T-SQL static code analysis

Unique rules to find Bugs, Vulnerabilities, Security Hotspots, and Code Smells in your T-SQL code

All rules 80

🔓 Vulnerability ①

 Bug (16)

 Security Hotspot 4

Code Smell (59)

Tags

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"CASE" input expressions should be invariant

Analyze your code

 Bug
  Critical
 
 unpredictable

Under the covers, Simple CASE expressions are evaluated as searched CASE expressions. That is,

```
CASE @foo
WHEN 1 THEN 'a'
WHEN 2 THEN 'b'
```

is actually evaluated as

```
CASE
WHEN @foo = 1 THEN 'a'
WHEN @foo = 2 THEN 'b'
```

In most situations the difference is inconsequential, but when the input expression isn't fixed, for instance if `RAND ()` is involved, it is likely to yield unexpected results. For that reason, it is better to evaluate the input expression once, assign it to a variable, and use the variable as the CASE's input expression.

This rule raises an issue when any of the following is used in a CASE input expression: RAND, NEWID, CRYPT_GEN_RANDOM.

Noncompliant Code Example

```
CASE CONVERT(SMALLINT, RAND()*@foo)  -- Noncompliant
WHEN 1 THEN 'a'
WHEN 2 THEN 'b'
```

Compliant Solution

```
DECLARE @bar SMALLINT = CONVERT(SMALLINT, RAND()*@foo)
CASE @bar
WHEN 1 THEN 'a'
WHEN 2 THEN 'b'
```

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