SQL ServerCentral.com

The World's Largest Community of SQL Server Professionals

Lucky 7: Seven Different Solutions for Bad Parameter Sniffing

Grant Fritchey, *Product Evangelist*

Red Gate Software

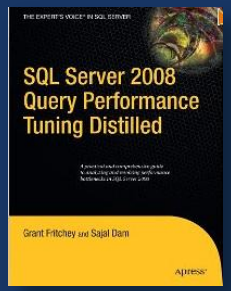
Goals

- Understand parameter sniffing
- Recognize bad parameter sniffing
- Learn ways to fix bad parameter sniffing

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

Who?

- Product Evangelist for Red Gate Software
- Microsoft SQL Server MVP
- PASS Chapter President
- Author:
  - SQL Server Execution Plans
  - SQL Server 2008 Query Performance Tuning Distilled
  - SQL Server MVP Deep Dives II



Agenda

- Parameter Sniffing
- Bad Parameter Sniffing
- Local Variables
- OPTIMIZE FOR <value>
- OPTIMIZE FOR UNKOWN
- WITH RECOMPILE
- Statistics
- Plan Guides
- Turning Parameter Sniffing Off

Parameter Sniffing

- It's a good thing… except when it isn't
- Automatic
- Only works on parameters
- Statistics
  - Average vs. Specific
- Parameter list in execution plan

Bad Parameter Sniffing

- Differentiate from Parameter Sniffing
- Still about statistics
- Intermittent
- Different plans
- Focus on the compiled value
- Compare to runtime
- When it’s bad, it’s very bad

Local Variables

- Eliminate parameters
- Turn parameters into local variables
- Produces “generic” plan

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

OPTIMIZE FOR <value>

- Specific and accurate
- Changes over time
- Produces “precise” plan

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

OPTIMIZE FOR UNKNOWN

- For when you're not sure
- Changes over time
- Produces "generic" plan

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

WITH RECOMPILE

- Specific every time
- Increases overhead
- May be more costly than the parameter sniffing
- Produces “precise” plan

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

Update Statistics

- After all, it's all about the statistics
- Stats can age without updating
- You may have auto-update turned off
- Sampled updates may be inadequate

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

Plan Guides

- Just a different way to use hints
- Produces whatever plan you define

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

Turn Sniffing Off

- Dangerous choice
- Last for a reason
- Turns it all off
- Everywhere
- Did I mention it's dangerous?

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

Goals

- Understand Parameter Sniffing
- Recognize Bad Parameter Sniffing
- Learn Ways to Fix Bad Parameter Sniffing

Certain images and/or photos on this page are the copyrighted property of 123RF Limited, their Contributors or Licensed Partners and are being used with permission under license. These images and/or photos may not be copied or downloaded without permission from 123RF Limited.

Questions?

How would you… ?

What happens when… ?

Why does… ?

When do I… ?

SQL ServerCentral.com

The World's Largest Community of SQL Server Professionals

Thanks for Attending

Visit www.sqlservercentral.com for free SQL Server eBooks, articles, videos, blogs, news, and more.

Please Don't Forget to Turn in Your Evaluations