

Platina



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Apoio

Como resolver qualquer problema no SQL

- Thiago [TC] Alencar
- Wilson Almeida

Quem sou eu ? Thiago [TC] Alencar



- Over 11 years of experience with SQL Server.
- Former Microsoft PFE Latam - 5 years in Brazil
- ACE (Advanced Cloud Engineer) at Microsoft Ireland
- Azure Data Engineer, MCT, MCSE. (+- 26 exams taken)
- www.tcalencar.com/blog
- <https://www.linkedin.com/in/alencardba/>
- alencar.dba@outlook.com / alencar.dba@gmail.com
- <https://www.youtube.com/@D.E.P.L.O.Y>
- SQL Hands On From End to End - <https://alencar-dba.kpages.online/sql-hands-on-from-end-to-end>

Quem sou eu ? Wilson Almeida



- 3 anos de experiencia como DBA SQL Server
- Formado em tecnologo de banco de dados pela Uninove
- DBA na Power Tuning
- Certificado Azure Fundamentals
- <https://www.linkedin.com/in/wilsonas/>

Objetivo

- Estabelecer uma estratégia de troubleshooting
- Apresentar as principais ferramentas
- Demonstrar um cenário real

The Agenda

- Por onde começar
- Ferramentas
- Cenários Comuns
- Demo

Por onde começar ?

High CPU Timeout

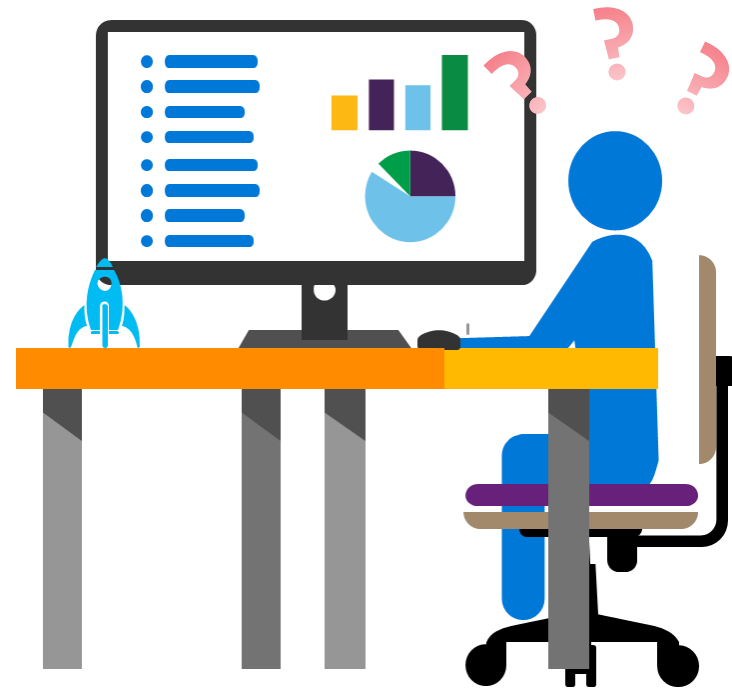
Missing index Memory leak

Troubleshooting

Slowly query Lock

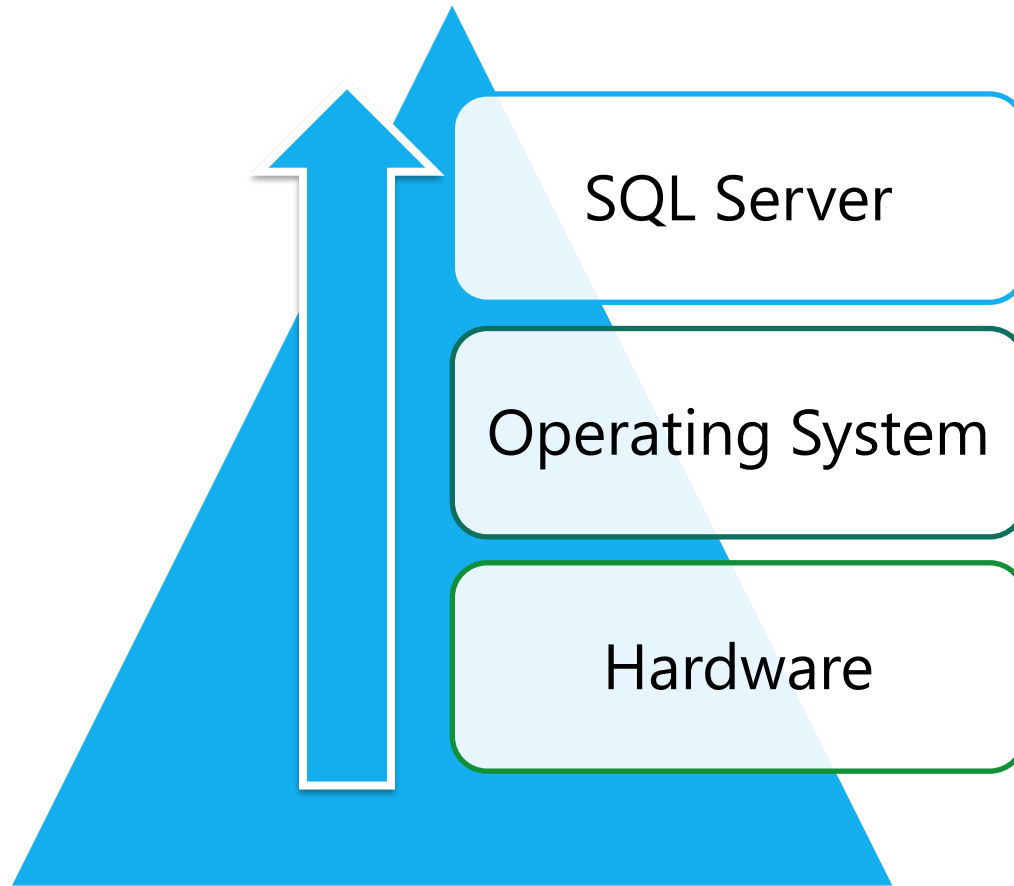
Waits Deadlock
I/O

Poor performance



Por onde começar?

- Faça as perguntas certas
- Isole o problema e quando ele ocorre
- É possível reproduzir?



- CPU
- Memory
- Network
- I/O
- Slow queries

```
SELECT CustomersBig.ContactN  
COUNT DISTINCT Orders  
SUM(Orders.Value)  
Orde  
gcustom  
Big CustomerID  
CustomersBig.ContactN  
OrdersBig.Value < 1.0  
CustomersBig.Conta
```

The code block is overlaid on a graphic of a hard drive and a RAM module. The hard drive is shown in a perspective view, and the RAM module is shown in a perspective view, partially overlapping the hard drive.

Ferramentas - Performance Counters

- Os contadores de performance fornecem uma camada de abstração de alto nível que fornece uma interface consistente para coletar vários tipos de dados do Sistema, Como CPU, Memória, uso de disco e etc.
 - Processor:% Processor Time
 - Process/%User Time
 - %Privileged Time
 - SQL Re-Compilations/sec
 - Batch Requests/Sec

Ferramentas - Waits - principais

- CXCONSUMER
- CXPACKET
- SOS_SCHEDULER_YIELD
- A lista ainda é grande

Ferramentas - DMVs

- `sys.dm_os_wait_stats`
- `sys.dm_exec_requests`
- `sys.dm_exec_sessions`
- `sys.dm_exec_query_stats`
- `sys.dm_exec_procedure_stats`
- `sys.dm_exec_sql_text`
- `sys.dm_exec_query_plan`

- Índices faltantes
- `sys.dm_db_missing_index_groups` , `sys.dm_db_missing_index_group_stats`
e `sys.dm_db_missing_index_details`

Ferramentas – Outras mais

- Performance Counters – OK
- Waits - OK
- DMVs - OK
- SP_WhoIsActive – Adam Machanic
- Sp_Blitz – Brent Ozar
- SQLDiag
- SQL Profiler
- ExEvent
- Query Store
- SQL Sentry
- SQLMoniTHOR
- E tem mais...

Cenários Comuns

High CPU

- Processor Time > 80%
- Excessive Recompilation
 - Recompilation\sec should be < 20% Batch Requests
- Missing Index
 - Sys.dm_db_missing_index.*
- Missing Statistics
 - When estimated rows are longest actual number of rows

High CPU

- CPU query consuming
 - sys.dm_exec_query_stats (total_worker_time)
 - SOS_SCHEDULER_YIELD
 - sys.dm_os_ring_buffers (RING_BUFFER_SCHEDULER_MONITOR)
- Missing Statistics
 - When estimated rows are longest actual number of rows

Q&A

Recursos

- SQL Hands On From End to End - <https://alencar-dba.kpages.online/sql-hands-on-from-end-to-end>
- Online – De 31/07 á 04/08 das 18h:30m – 23h:30m



