



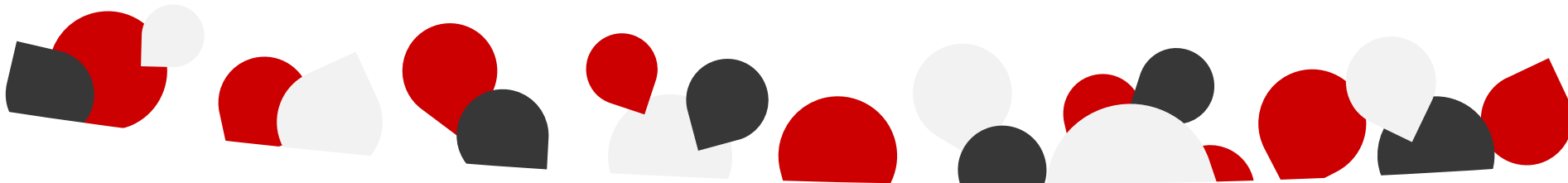
SQL in the City *Streamed*



# What SQL Server Performance Metrics Should You Monitor?

Kathi Kellenberger

Redgate Software



# Who am I?



**Kathi Kellenberger**



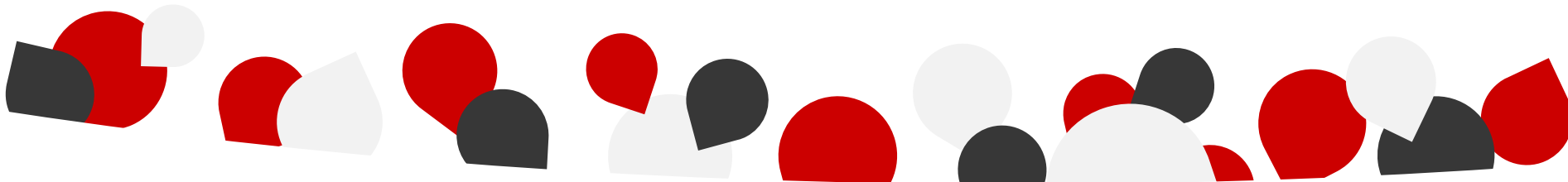
**Aunkathisql.com**



**Kathi.Kellenberger@red-gate.com**

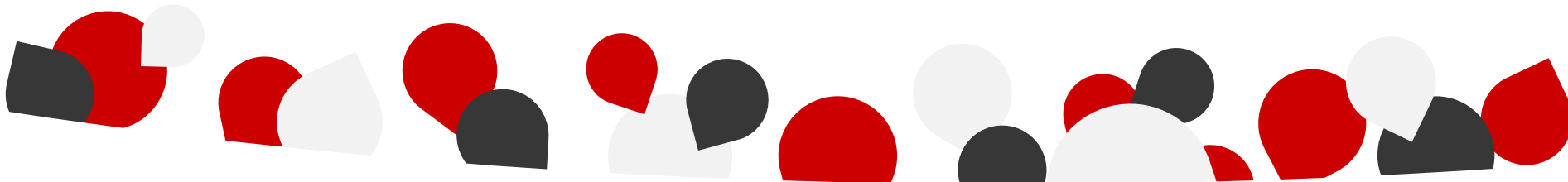


**@aunkathi**

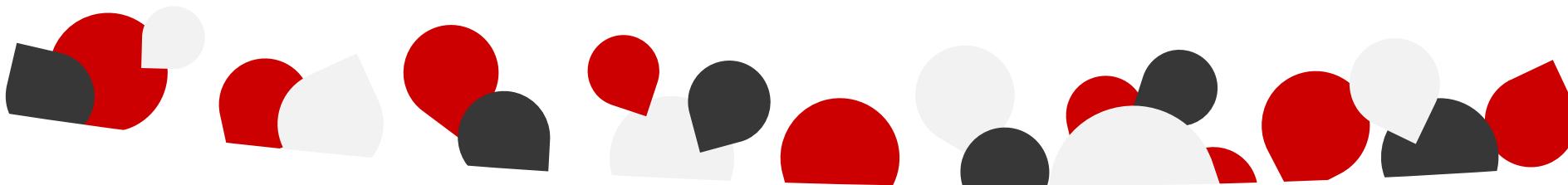
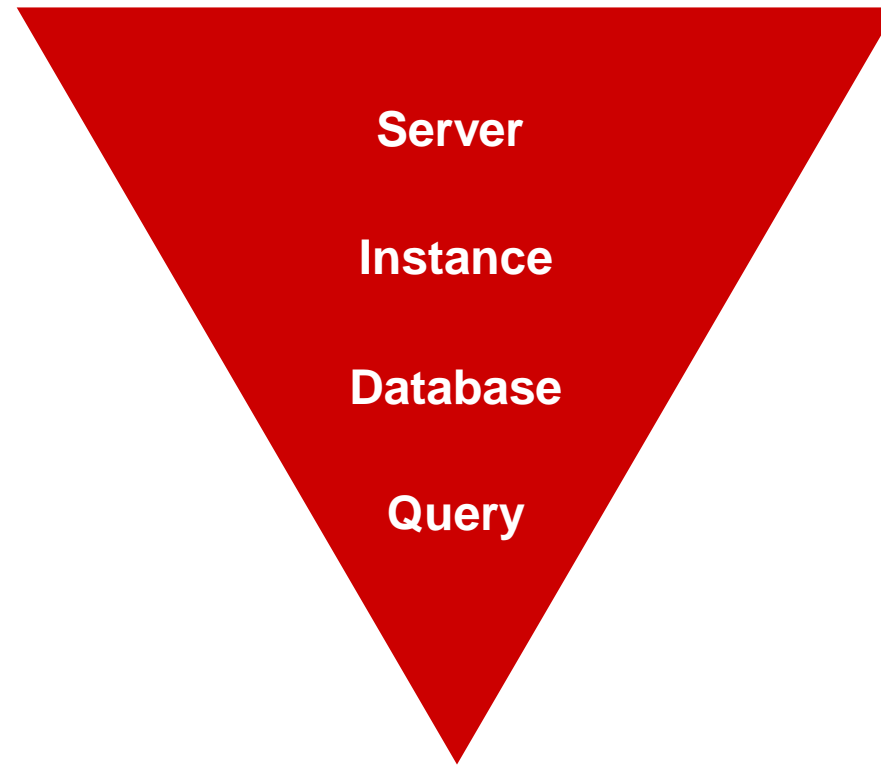


# Why Monitor SQL Server?

- Understand the bad thing that is happening now...or just happened
  - Know about those bad things before the phone rings!
- Predict problems
- Ensure good performance
- Resource planning

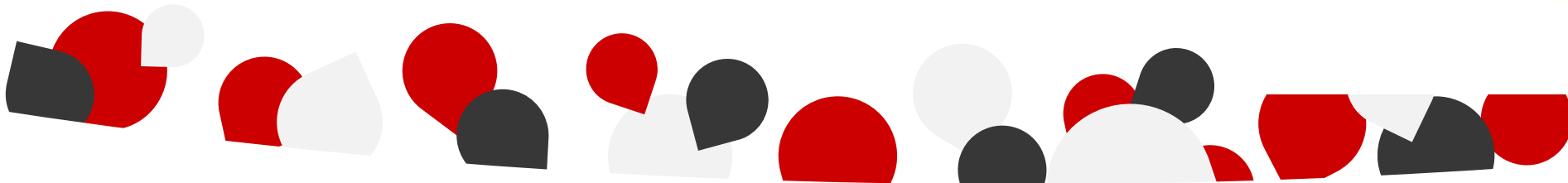


# What to Monitor?



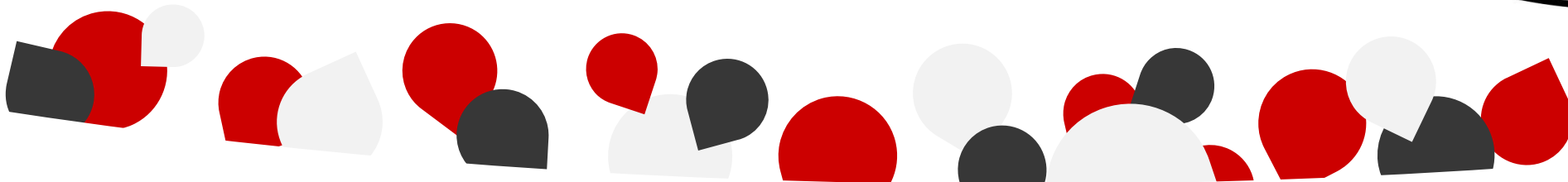
# Server

- Status – offline?
- Errors
- Physical resources
  - CPU utilization
  - I/O utilization
  - Memory utilization



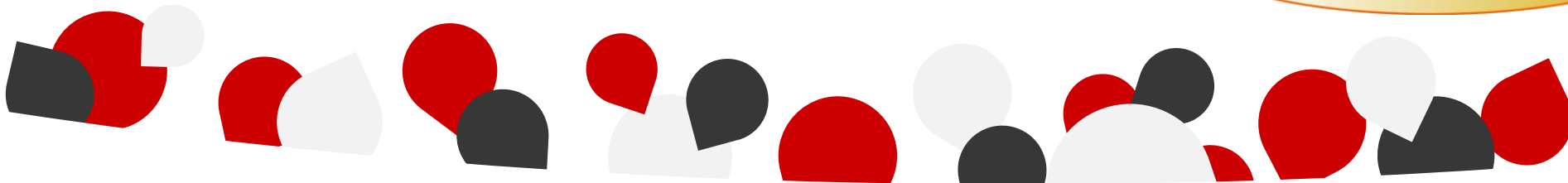
# Instance

- Status – offline?
- Errors & alerts
- Physical resources
  - Memory
  - Blocking
  - Workload
- Waits



# Database

- Status – online?
- Backups
- Maintenance (index, stats, etc.)
- Growth
- Workload

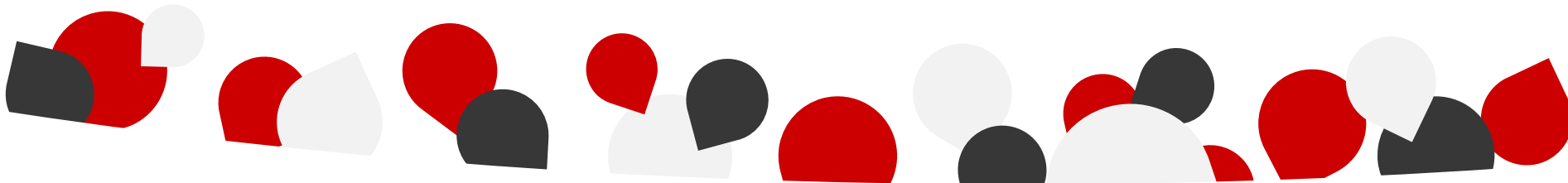




# Query

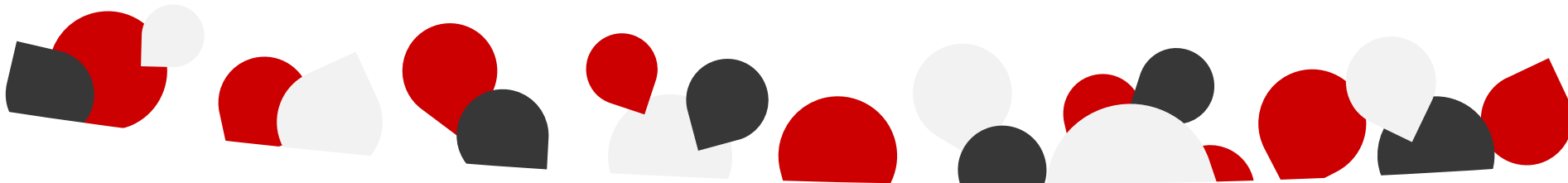
- Most frequent
- Most I/O
- Lonest running
- Most important
- Index tuning

**SELECT \* FROM**



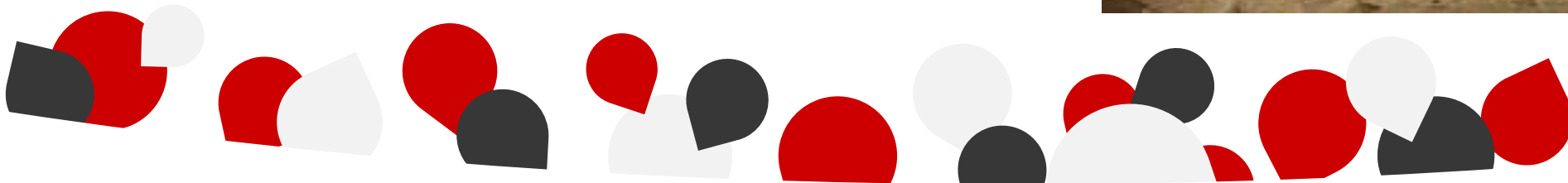
# Past Behavior

- What happened yesterday/last week/last month
- Baselines
- Trends
- “Those who do not learn from history are doomed to repeat it.”



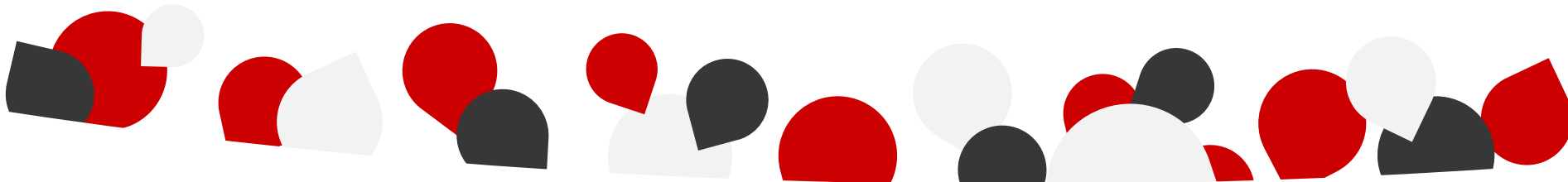
# Predict Future Behavior

- Using trends
- Tracking growth over time
- Communicate with the business
- Understand the business

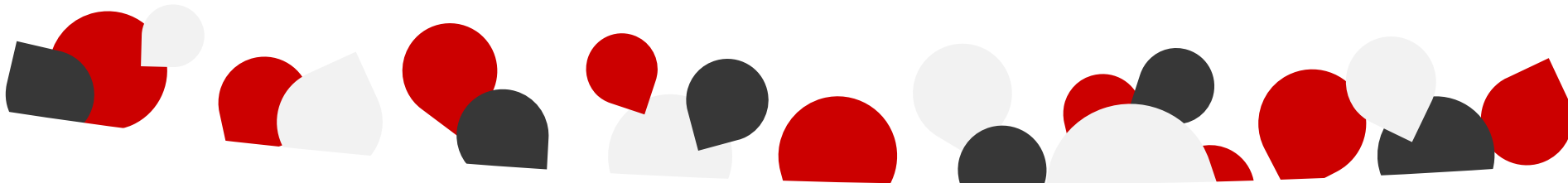


# Tools

- Perfmon
- Trace (deprecated)
- Extended Events
- DMVs and system views
- Query Store
- 3<sup>rd</sup> Party



# Demo



# Thank you

Kathi Kellenberger

Simple Talk Editor

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