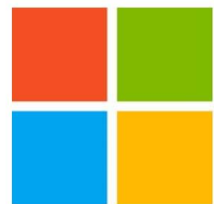


Gianluca Sartori

Benchmarking with WorkloadTools



Our Partners



Microsoft

Platinum



Gold



Bronze



Gianluca Sartori

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Agenda

- Benchmarking: tools and challenges
- Benchmarking in the cloud: less tools, more challenges
- DEMO!

What is a benchmark?

Describes performance in a given scenario

Evaluates *whatif* scenarios

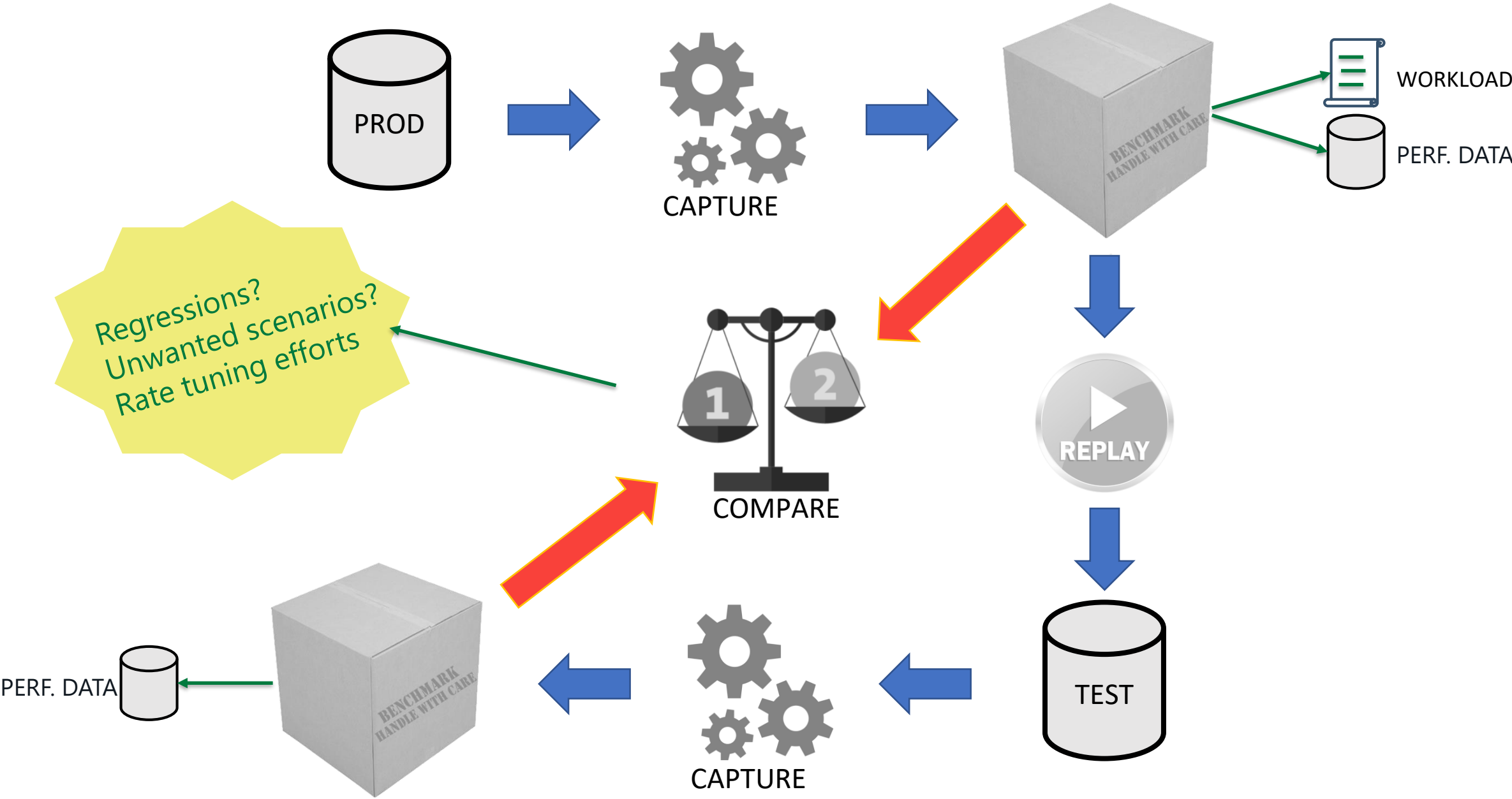
HW/Software Upgrade

Virtualization, Migration...

Helps rating tuning efforts

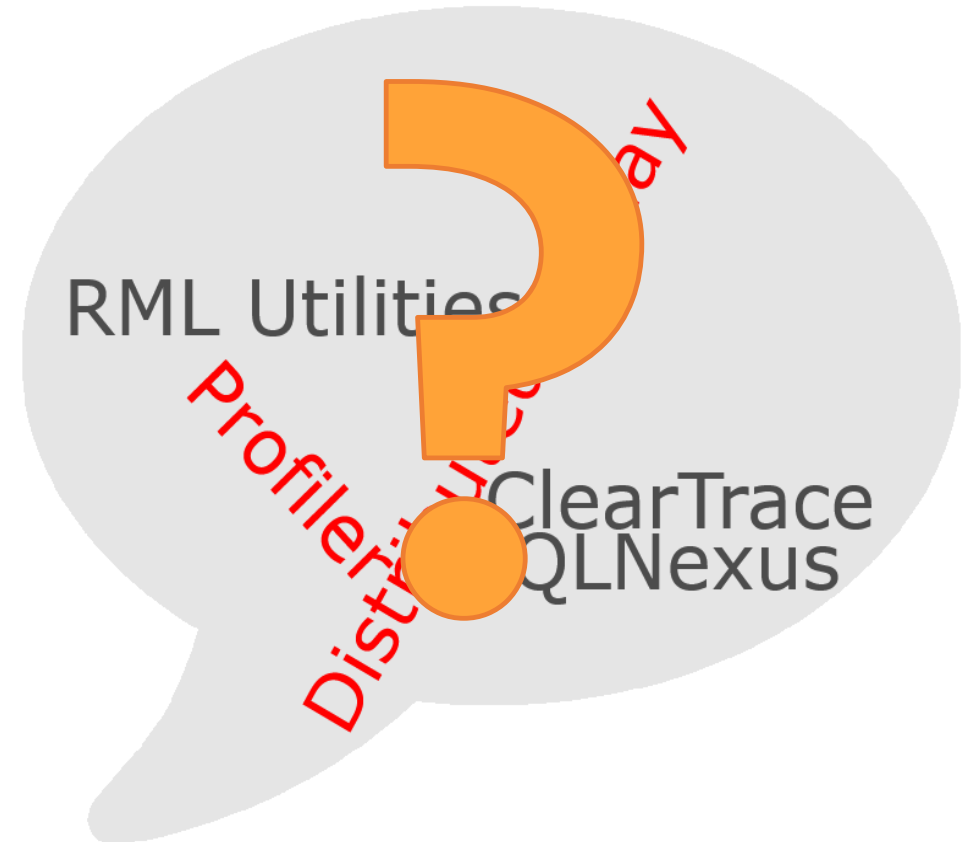
Server-wide configuration changes

Addition / removal of indexes



Benchmarking is hard

- Capture source workload and performance data
 - Which tool?
 - What to capture?
- Replay and capture performance data
 - Which tool?
 - What to capture?
- Compare results
 - Which tool?



Cloud Benchmarking is insanely hard!

- IAAS: Azure VM

Same as on-premises

- PAAS: Managed Instance

Traces not supported

Supports Extended Events:

- blob storage file target
- event streaming

Perfmon not supported

- PAAS: SQL Database

Traces not supported

Supports Extended Events:

- blob storage file target

Perfmon not supported

Introducing WorkloadTools

- Collection of Open Source tools

<https://github.com/spaghettidba/WorkloadTools>

- Takes care of all aspects of benchmarking

Workload capture

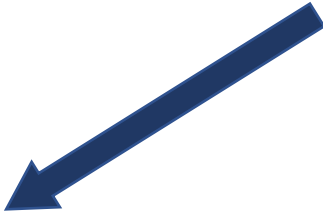
Workload analysis

Workload replay

- Works against Azure SQL Database

- Can do real-time capture and replay

UNIQUE
FEATURES!!!



WorkloadTools

- **Multiple Listener types**

- SqlTrace

- Extended Events

- File (saved workload)

- **Multiple Consumer types**

- File (save workload)

- Analysis

- Replay

- **Easy to configure**

- Accepts .json configuration files

- Scriptable via PowerShell

- **Easy to visualize**

- PowerBI for data analysis

- WorkloadViewer

- Workload Analysis

- Workload Comparison





DEMO:
Benchmarking with
WorkloadTools

Benchmarking is ~~hard~~ as easy as pie!

- Capture source workload and performance data

- Which tool?
- What to capture?

- Replay and capture performance data

- Which tool?
- What to capture?

- Compare results

- Which tool?

RML Utilities
WorkloadTools
ClearTrace
SQLNexus

Distributed Replay

QUESTIONS?

ASK ME!

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Download slides and demos

<https://github.com/spaghettidba/CodeSamples/>