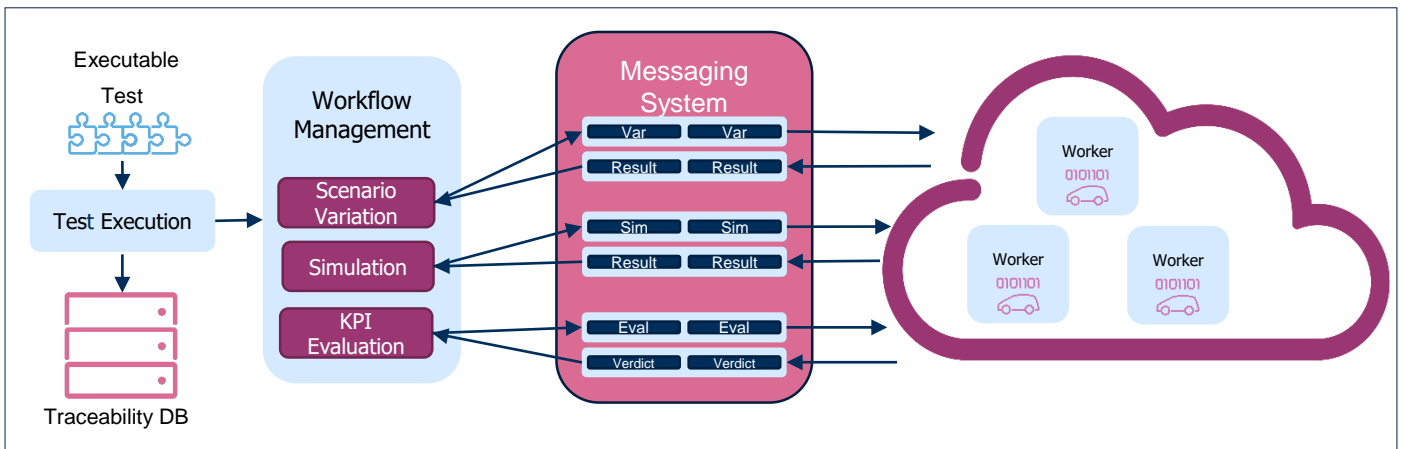


# SCENARIO-BASED-TESTING AT SCALE

Handling large numbers of simulations using cloud technology

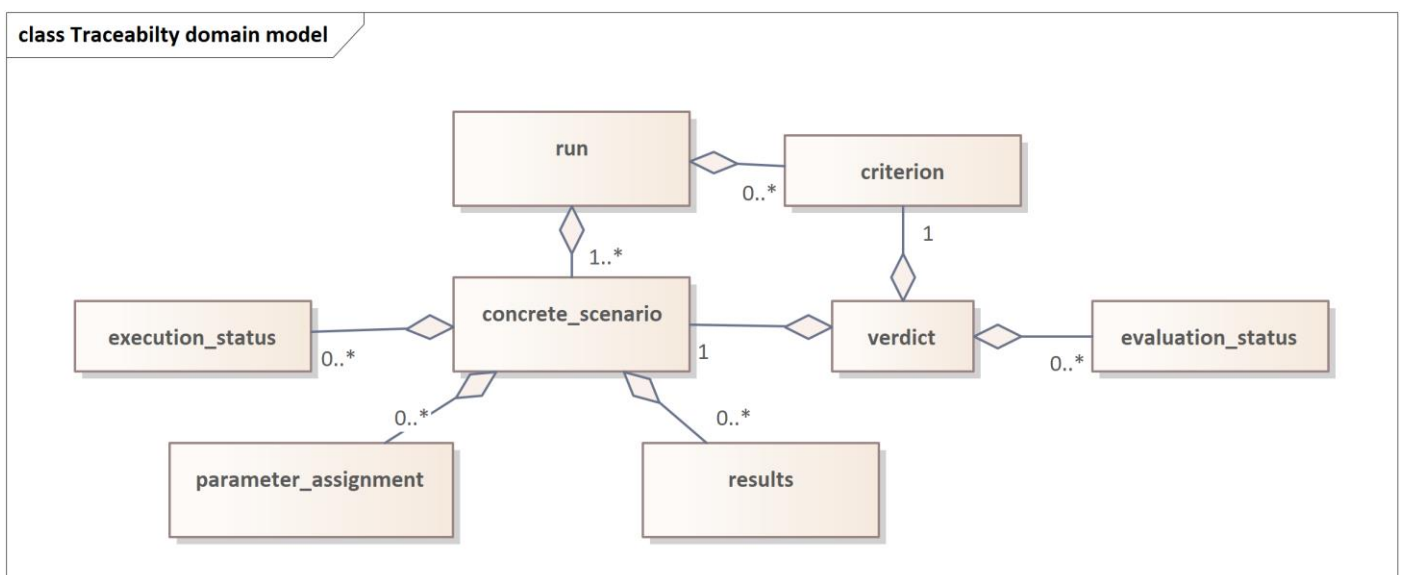
Slavisa Krebs-Radic, Franziska Körtke, ZF



Simulation as a service

Scenario-based testing leads to a significant number of necessary tests, especially when incorporating parameter variation techniques. This easily results in an exponential growth of necessary simulation runs. Handling even small sample sizes requires a highly scalable computing infrastructure. **Pre- and post-processing steps** also have to be taken into account

for the simulation. We advocate the usage of a **cloud computing system with integrated workflow management**. An **event-driven architecture** approach helps with handling the asynchronous nature of long-running simulations.



Domain model for traceability

Simulations should be executed in a **traceable** way to facilitate the reproducibility and auditability of produced results. Each **run** defines a list of **concrete scenarios** with their **parameter assignments**.

Execution of simulations produces **results**. Evaluation of a set of **criteria** over the simulation results on each concrete scenario is performed resulting in **verdicts** per criterion and concrete scenario.

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## Projektpartner



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