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Abstract

The paper reports on an analysis technology based on the tracing approach to test trustworthy requirements of a distributed system. The system under test is instrumented such that it generates events at runtime to enable reasoning about the implementation of these requirements in a later step. Specifically, an event log collected during a system run is converted into a specification of the system. The (trustworthy) requirements of the system must be formally specified by an expert who has sufficient knowledge about the behavior of the system. The reengineered model of the system and the requirement descriptions are then processed by an off-the-shelf model checker. The model checker generates scenarios that visualize fulfillments or violations of the requirements. A complex example of a concurrent system serves as a case study.