Reliability of Distributed Applications with COTS Components†
(Position Statement)

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Many of the software systems we build today are distributed applications and use as many software components as possible. These components might be commercial off-the-shelf (COTS) or in-house software libraries, modules or objects. Past research on computing the reliability of a software system based on the modular program structure of that system[2, 5] did not take into account the distributed aspects of the modules comprising the system. Recent research on that topic[1, 3, 4] looks at the field trouble reports or the test data of the components to estimate the reliability of the overall system. We will present some interesting challenges in modeling, analyzing and estimating the reliability of a software system when the components are distributed on a network or when the source code for the components is unavailable.

References


