

Exploiting the enumeration of all feature model configurations: A new perspective with distributed computing

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Feature models are widely used to encode the configurations of a software product line in terms of mandatory, optional and exclusive features as well as propositional constraints over the features. Numerous computationally expensive procedures have been developed to model check, test, configure, debug, or compute relevant information of feature models. In this paper we explore the possible improvement of relying on the enumeration of all configurations when performing automated analysis operations. We tackle the challenge of how to scale the existing enumeration techniques by relying on distributed computing. We show that the use of distributed computing techniques might offer practical solutions to previously unsolvable problems and opens new perspectives for the automated analysis of software product lines. © 2016 ACM.