



Título: An Empirical Study on the Impact of Exception Handling Design in the API Unbundling

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Resumo:

Software unbundling consists of dividing an existing software artifact into smaller ones. Unbundling can be useful for removing clutter from the original application or separating different features that may not share the same purpose, or simply for isolating an emergent functionality that merits being an application on its own. This phenomenon is frequent with mobile apps and it is also propagating to APIs. On one hand, previous work has investigated the degree in which an API can be unbundled based on its client usage. On the other hand, other studies have investigated the relationship between API's exception handling design and their client's reliability. However, little is known about the relationship between exception handling design and API's "unbundability". Thus, we designed an empirical study to better understand this phenomenon. First, we selected a set of 10 popular Java libraries hosted on GitHub and automated split these libraries into 2 or more bundles based on their client's usage (+69,000 clients), gathering information about the APIs' "unbundability". Second, we searched

these libraries looking for exception handling bad practices regarding APIs design. Next, we will perform a series of automated refactorings toward to eliminate exception handling bad practices, generating new versions of the selected libraries. Finally, we will perform an “unbundability” study on these new libraries’ versions and compare the results with the previous one to analyze if and how the APIs’ “unbundability” is affected by the exception handling design.

Banca:

- Prof. Dr. Lincoln Souza Rocha (MDCC/UFC - Orientador)
- Prof. Dr. João Bosco Ferreira Filho (MDCC/UFC - Coorientador)
- Prof. Dr. Fernando Antonio Mota Trinta (MDCC/UFC)