Design and Implementation of the Language Server Protocol for the Nickel Language

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The expansive Language Integration, i.e. code completion, debugging as well as static code analysis, refactoring and more, has typically been the hallmark of Integrated Development Environments (IDE). Typical IDEs however focus on a selection of established languages to integrate which stifles the adoption of new languages. Contrasting IDEs, modular text editors allow for plugin driven integration of languages as contributed by their respective communities. Yet, providing language integration to multiple platforms requires repeated efforts for each one. The Language Server Protocol aims to be a solution to this problem by connecting a language specific Language Server to editors which act as generic clients. This work presents the design of a transferable Language Server architecture and its implementation for the Nickel languages. The product is finally evaluated quantitatively for its performance and qualitatively for its perception by future users.

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