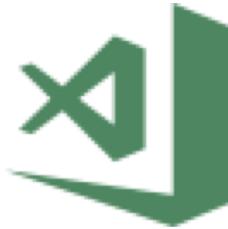


Eclipse Demo Camp, Zürich 2018

Visual Studio Code

Martin Aeschlimann
Senior Software Engineer
Microsoft



Visual Studio Code

A lightweight, fast, extensible editor

Runs on MacOS, Linux and Windows



Free and open source: <https://github.com/Microsoft/vscode>

Since 2015 new release every month

A strong community of more than
1M dedicated users (>10d/month).

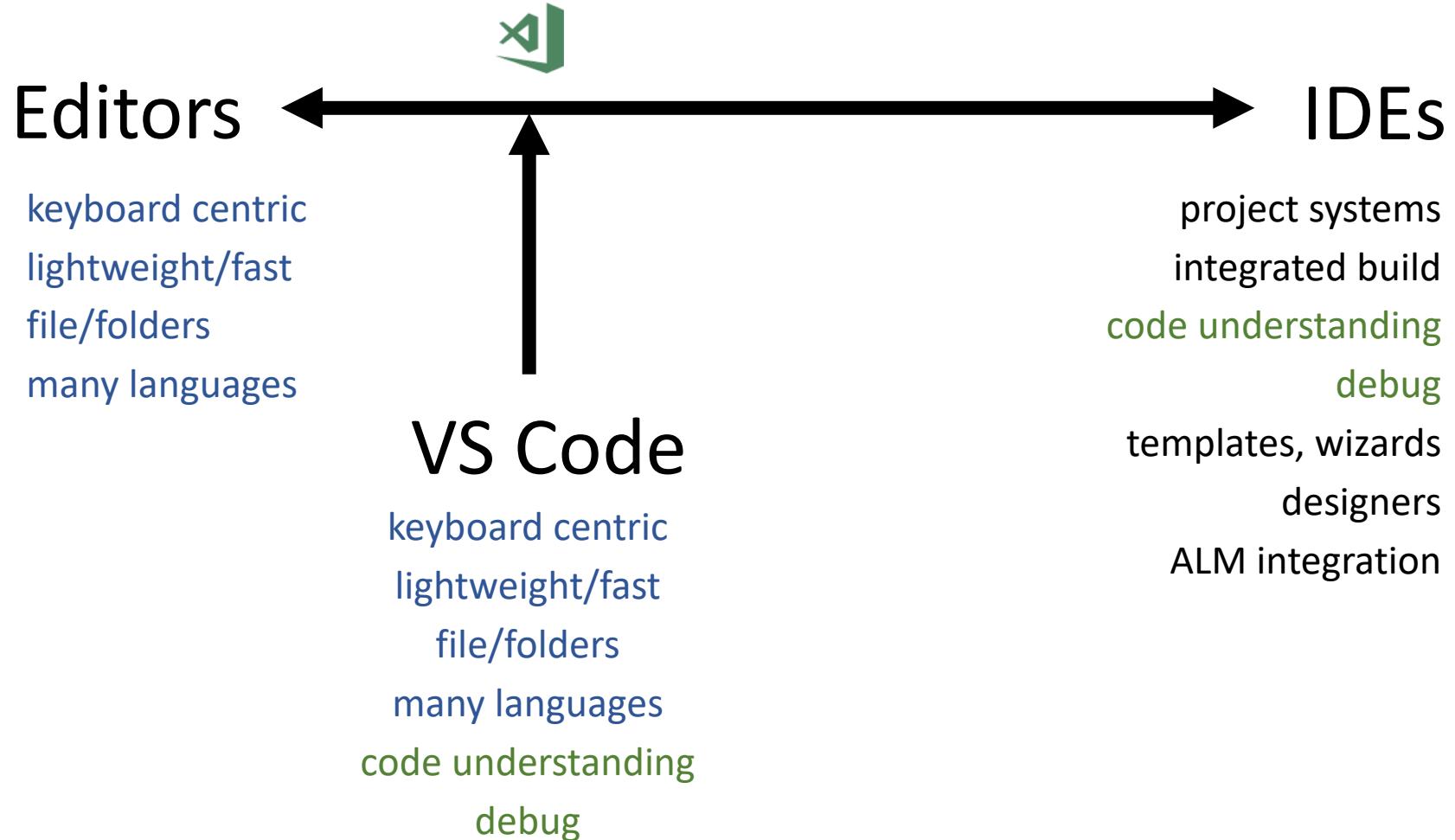
Marketplace with >6'600 extensions

<https://code.visualstudio.com/>

The screenshot shows the Visual Studio Code Marketplace interface. At the top, there's a search bar and a filter section for categories and sorting by downloads. Below that, a grid of extension cards is displayed. Some visible extensions include:

- Python (Microsoft) - Rating: ★★★★★, Size: 11M, Description: Linting, Debugging (multi-threaded, remote), Intellisense, code formatting...
- C/C++ (Microsoft) - Rating: ★★★★★, Size: 8.6M, Description: C/C++ IntelliSense, debugging, and code browsing.
- Debugger for Chrome (Microsoft) - Rating: ★★★★★, Size: 8.3M, Description: Debug your JavaScript code in the Chrome browser, or any other target that supports Webpack.
- ESLint (Dirk Baeumer) - Rating: ★★★★★, Size: 8.2M, Description: Integrates ESLint JavaScript into VS Code.
- vscode (Roberto Huerta) - Rating: ★★★★★, Size: 6.6M, Description: Icons for Visual Studio Code.

The sidebar on the right lists categories and their counts, such as All categories (28), Debuggers (147), Extension Packs (207), etc.



More than an editor

Integrates

- Debugging
- Source Control Management
- Terminal

Not an IDE

No wizards

No built-in project system

No built-in build system

Multi Language

Offer first class support for an ever-increasing array of languages

Rich language support, built-in or through extensions:

JavaScript, TypeScript, C#, C++, CSS, F#, Go, HTML, Java, JSON, LESS,
Markdown, PHP, Powershell, Python, SCSS

Over 1500 language extensions in the Marketplace.

Degrees of Language Support

Syntax highlighting

[TextMate Grammar](#)

Brackets, Indentation Rules,
Comment Rules, Snippets

[Language specific
configuration](#)

Document symbol, Color decorators,
Formatting, Syntax validation

[Parser, Scanner](#)

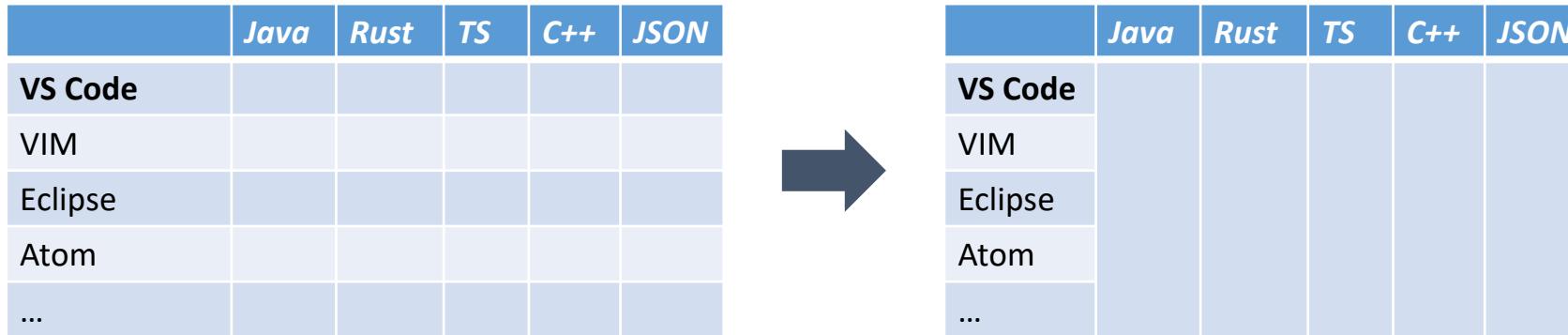
Hovers, Code assist, Code actions, Semantic validation
Find references, Code lens, Rename, Workspace symbols

[Symbol lookup,
Resolving across files](#)

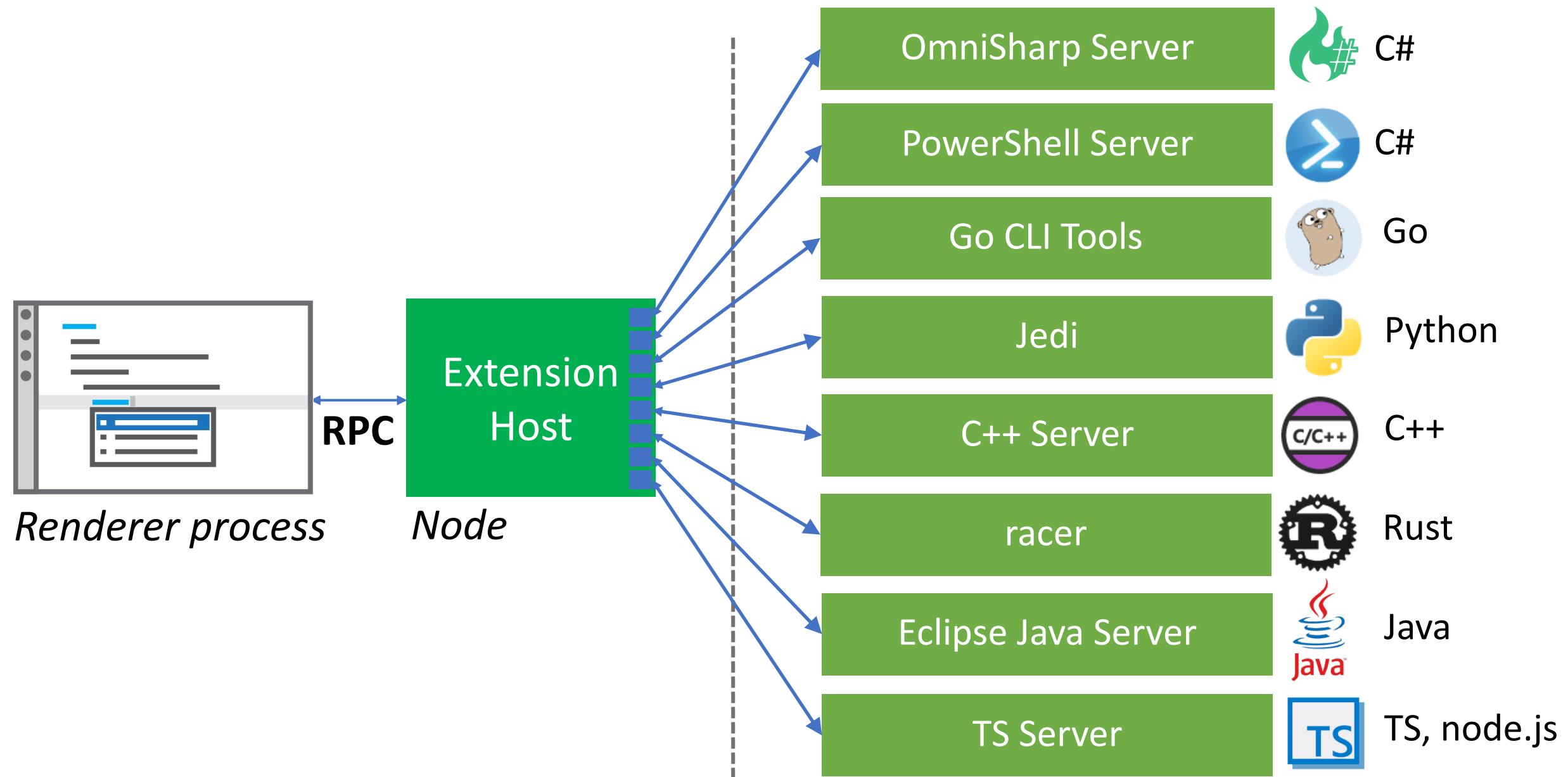
Debugger Integration

[Write a debug
adapter](#)

The Matrix Problem for Language Providers

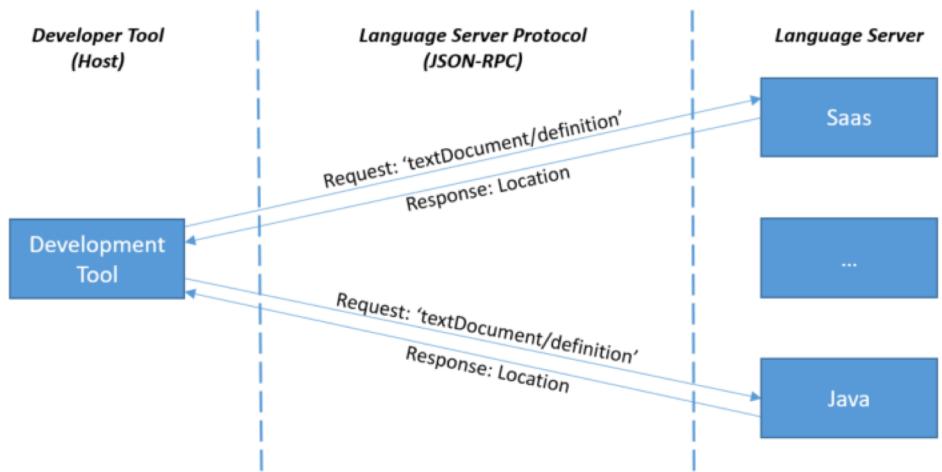


Language Server Protocol

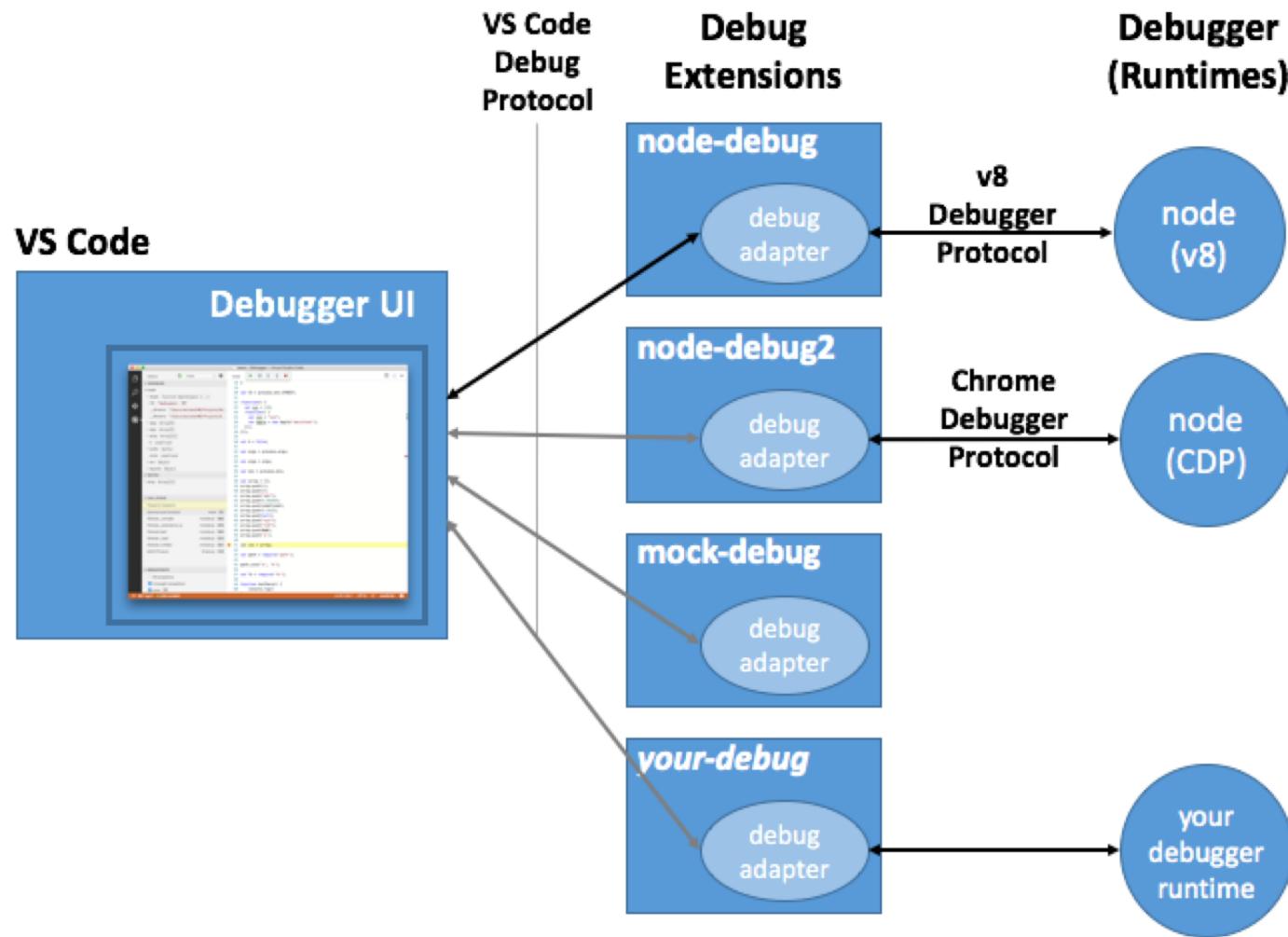


Language Server Protocol

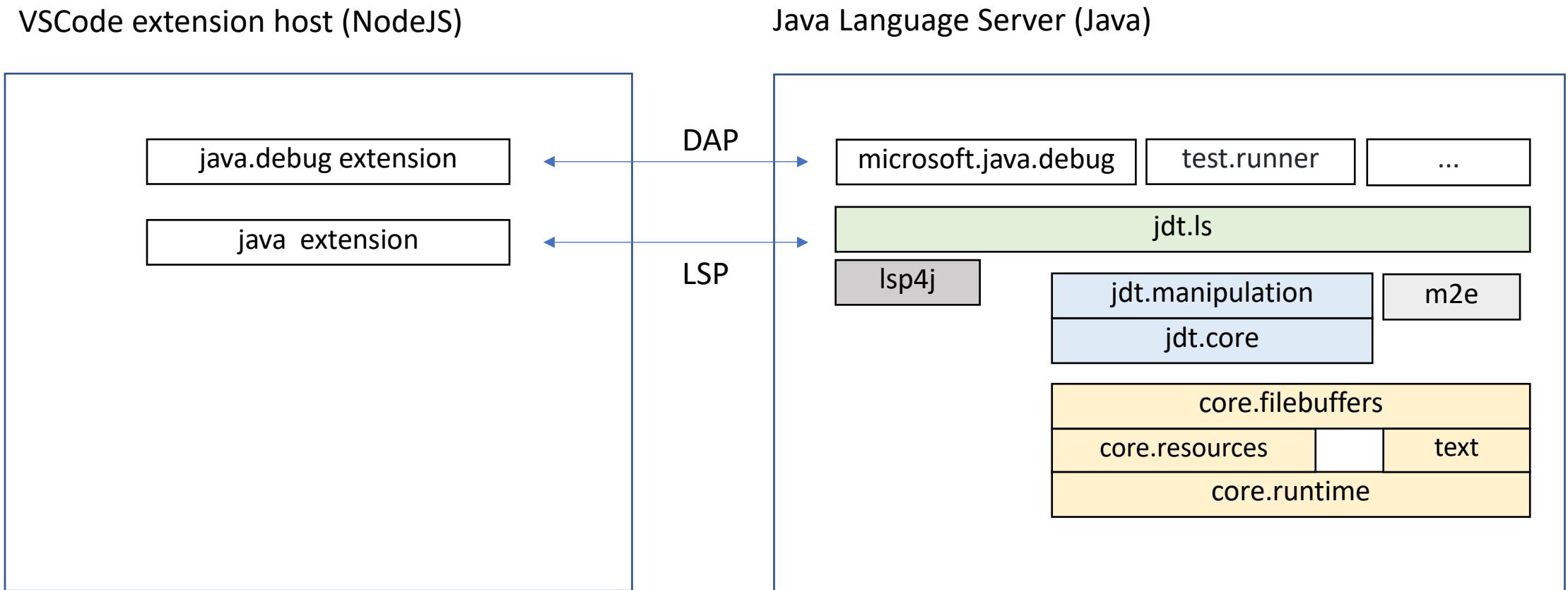
- Standardizes how tools and language supports ('Language server') communicate
- JSON RPC over STD-IO, sockets or pipes
- Language server can be implemented in programming language of choice
- A win for both language providers and tooling vendors
- Covers Validation, Code Completion, Hovers, Document Symbols, Workspace Symbols, Goto Declaration, References, Code Actions, Formatter, Color decorators, Folding ranges



Debug Adapter Protocol



Java Language Server



Visual Studio Code Home:

<https://code.visualstudio.com/>

Git repo:

<https://github.com/Microsoft/vscode>

Standalone editor:

<https://github.com/Microsoft/monaco-editor>

Language server protocol:

<https://microsoft.github.io/language-server-protocol>

Java language server:

<https://github.com/eclipse/eclipse.jdt.ls>