TxPipe Docs

VSCode Extension

Tx3 VSCode Extension is a Visual Studio Code extension designed to improve your development experience with `tx3`. It provides features such as syntax highlighting, LSP diagnostics, and interactive panels for transaction resolution and visualization.

Installation Requirements

To use the Tx3 extension, you must first ensure that the **tx3 toolchain** is installed on your system. You can find detailed installation instructions and a quick start guide in the official Tx3 documentation.

Once the Tx3 toolchain is installed, you can install the VS Code extension from the Visual Studio Code Marketplace:

1. Open Visual Studio Code.
2. Go to the Extensions view by clicking on the square icon in the sidebar or pressing `Ctrl+Shift+X`.
3. Search for "Tx3 Language Support".
4. Click the "Install" button for the extension published by TxPipe.

To verify that the installation was successful, open a file with the `.tx3` extension. You should see syntax highlighting applied to the code.

The extension requires the path to the Tx3 language server executable. By default, it looks for the executable at `~/.tx3/default/bin/tx3-lsp`. If your installation places the executable elsewhere, you can configure the path in the extension settings:

1. Open VS Code Settings (`Ctrl+,`).
2. Search for "Tx3".
3. Update the "Tx3: Lsp Path" setting with the correct path to your `tx3-lsp` executable.

Features Overview

The Tx3 Language Support extension provides the following key features:

- **Syntax Highlighting**: Provides clear and intuitive syntax highlighting for `.tx3` files, making your code easier to read and understand.
- **LSP Diagnostics**: Utilizes the Language Server Protocol (LSP) to deliver real-time diagnostics, including errors and warnings, helping you identify and resolve issues as you code.
- **Tx3 Resolve Panel**: An interactive webview panel for generating the transaction CBOR from your Tx3 code using a configured TRP server.
- **Tx3 Diagram Visualization Panel**: A graphical webview panel for visualizing transaction diagrams based on the Abstract Syntax Tree (AST) of your Tx3 code.

Commands Overview

The extension registers several commands within VS Code, accessible primarily through the Command Palette (`Ctrl+Shift+P` or `Cmd+Shift+P` on macOS):

- `Tx3: Start Tx3 Language Server`: Starts the Tx3 language server. This is typically handled automatically when you open a `.tx3` file.
- `Tx3: Open Tx3 Resolve Panel`: Opens the interactive panel for generating transaction CBOR.
- `Tx3: Open Tx3 Diagram Panel`: Opens the graphical panel for visualizing transaction diagrams.

Command Details

`Tx3: Start Tx3 Language Server`

This command is responsible for starting the background process of the Tx3 Language Server. The language server provides features like diagnostics and data for the webview panels.

Syntax:

This command is not typically run manually by the user. The extension automatically attempts to start the language server when a `.tx3` file is opened, using the executable path specified in the extension settings (`tx3.lspPath`).

Usage:

You generally do not need to execute this command directly. If the language server fails to start automatically, ensure the `tx3.lspPath` setting is correct and that the Tx3 toolchain is properly installed.

`Tx3: Open Tx3 Resolve Panel`

This command opens the Tx3 Resolve Panel, an interactive interface within VS Code that allows you to generate the transaction CBOR for the active `.tx3` file by interacting with a TRP server.

Syntax:

```
Tx3: Open Tx3 Resolve Panel
```

Usage:

1. Open a `.tx3` file in the VS Code editor.
2. Open the Command Palette (`Ctrl+Shift+P` or `Cmd+Shift+P`).
3. Type "Open Tx3 Resolve Panel" and select the command.
4. Alternatively, click the `play` icon button that appears in the editor's title bar when a `.tx3` file is open.

The panel will open, typically in a split view. It will load the transaction data from your active `.tx3` file and allow you to interact with configured TRP servers to resolve the transaction.

Tx3: Open Tx3 Diagram Panel

This command opens the Tx3 Diagram Panel, a graphical interface within VS Code that visualizes the structure of transactions defined in your active `.tx3` file.

Syntax:

```
Tx3: Open Tx3 Diagram Panel
```

Usage:

1. Open a `.tx3` file in the VS Code editor.

2. Open the Command Palette (`Ctrl+Shift+P` or `Cmd+Shift+P`).

3. Type "Open Tx3 Diagram Panel" and select the command.

4. Alternatively, click the `diagram` icon button that appears in the editor's title bar when a `.tx3` file is open.

The panel will open, typically in a split view, displaying a diagram representing the structure of the transactions in your active file.

Configuration

The Tx3 Language Support extension provides the following configuration options in VS Code Settings:

- `tx3.lspPath`: Specifies the path to the Tx3 language server executable.
  - Type: `string`
  - Default: `~/.tx3/default/bin/tx3-lsp`
  - Description: The absolute path to the `tx3-lsp` executable on your system.
- `tx3.trpServers`: A list of TRP servers that the Tx3 Resolve Panel can use to resolve transactions.
  - Type: `array` of objects
  - Description: Configure the name, URL, and optional headers for each TRP server.

Example `tx3.trpServers` configuration (in `settings.json`):

```
"tx3.trpServers": [
    {
        "name": "Demeter Cardano Preview",
        "url": "https://cardano-preview.trp-m1.demeter.run",
        "headers": {
            "dmtr-api-key": "YOUR_API_KEY"
        }
    },
    {
        "name": "Custom Local Server",
        "url": "http://localhost:8080"
    }
]
```