

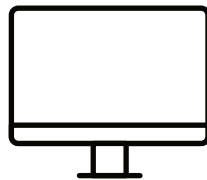
Shell API for open access to the PIPE storage network

Web and dapps can communicate directly with PIPE storage without the need for an intermediary server or API. This is more decentralized, increasing reliability and making them potentially cheaper.

PIPE does not use conventional APIs for communication between apps and storage. Instead, PIPE uses a WASM module. This way, a web app can communicate directly with any PIPE storage node rather than

having to go through a bootstrap node to gain network access.

Because of this, the shell API reduces network overhead and eliminates single points of failure, making PIPE more reliable.



1. Frontend/UI

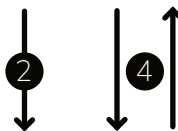
- Include WASM Module.
- Generate Seed.
- Initialize WASM Instance.
- Optionally, override WASM Node to connect with your own PIPE Node.*



WASM instance

2. Upload preparation

- Data is encoded to be saved to Uint8Array.
- Encoded data and file/data name is passed to the upload folder of the WASM instance.
- The WASM Instance passes data and name to WASM Module.



4. Download preparation

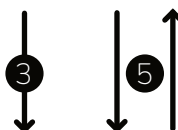
- *Optional: Call the list function to see the names of all files saved by the seed.*
- Pass the name of the file to download to the Download Function of WASM Instance.
- The WASM Instance passes the filename to the WASM Module.



WASM module

3. Data storage

- The WASM Module uploads the data with its provided name to PIPE Storage.



5. Data retrieval

- The WASM Module fetches the requested file from PIPE and returns it to the app.



PIPE storage network