Deploy with libraries

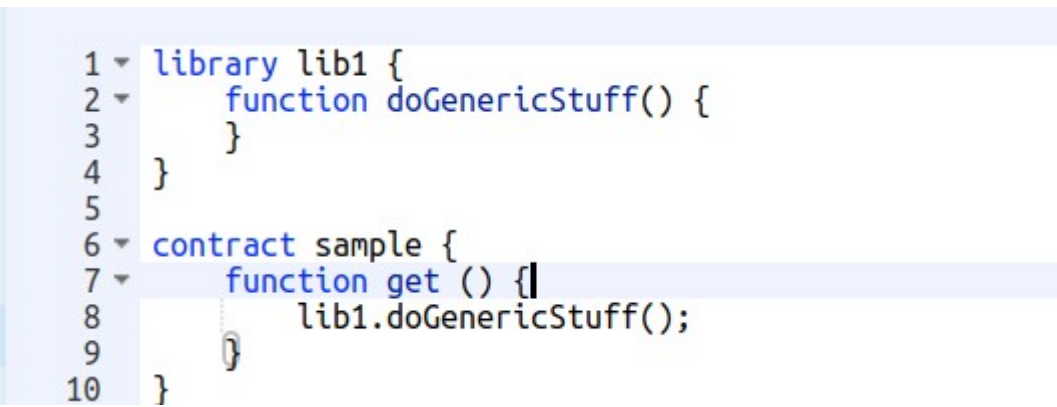
It is very often require that a contract need to interact with one or more libraries. This walkthrough tutorial covers this use case.

Deploy with libraries

We will use a very basic example:

Run in the terminal

```
remix.loadgist('c230a699a7ed7ea55254bad7a01ac97a')
```



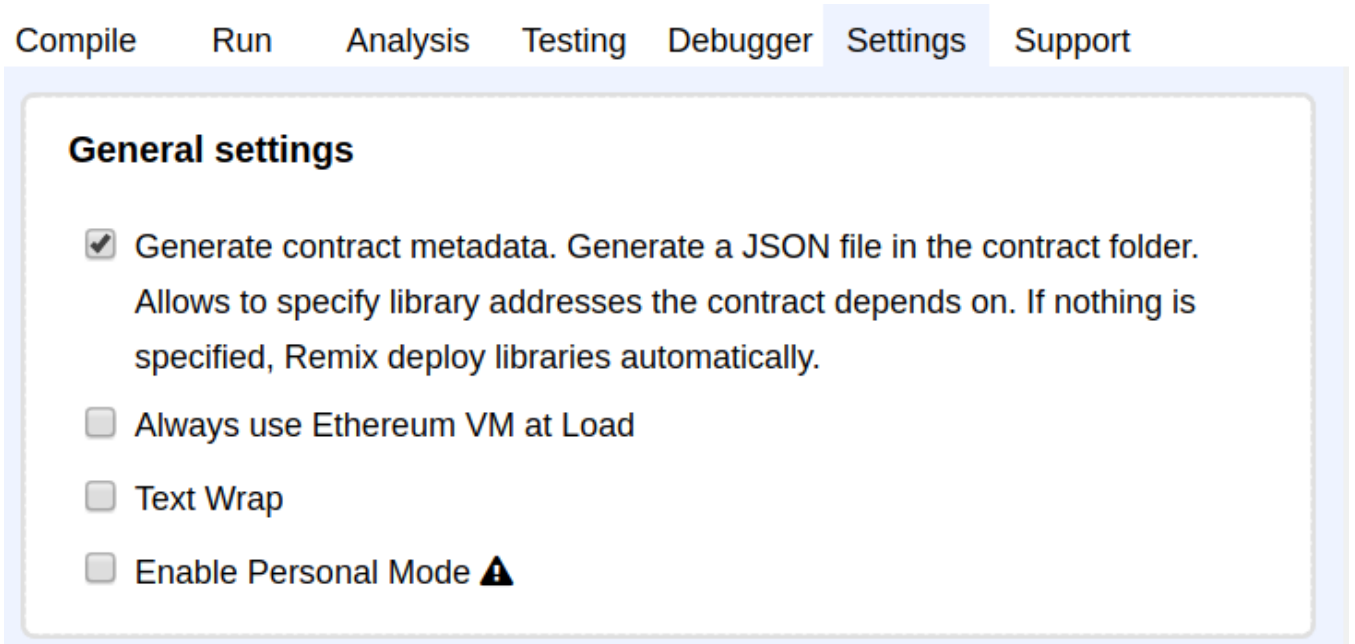
Deploy with libraries

We are going to:

- Deploy the library
- Use the metada file to reference the library address. That reference will be use at deployment time to link the contract to the library.
- Deploy the contract

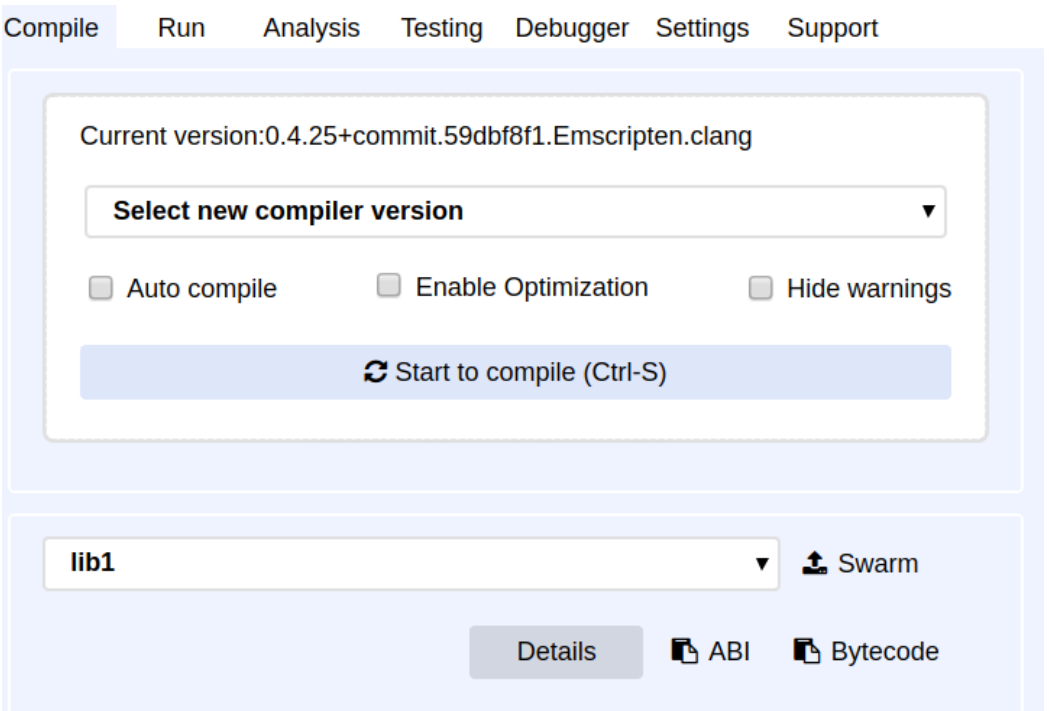
Deploy with libraries

First we need to activate the metadata file generation



Deploy with libraries

Start compiling



Deploy with libraries

“sample.json” should be available.

Deploy with libraries

The metadata file contains:

- compilation result data (bytecode, sourcemap),
- the contract abi
- the libraries linkage (that the interesting part for us now ;))

Deploy with libraries

Note that the config is duplicated for each network (Ropsten, Mainnet, Rinkeby, etc..)

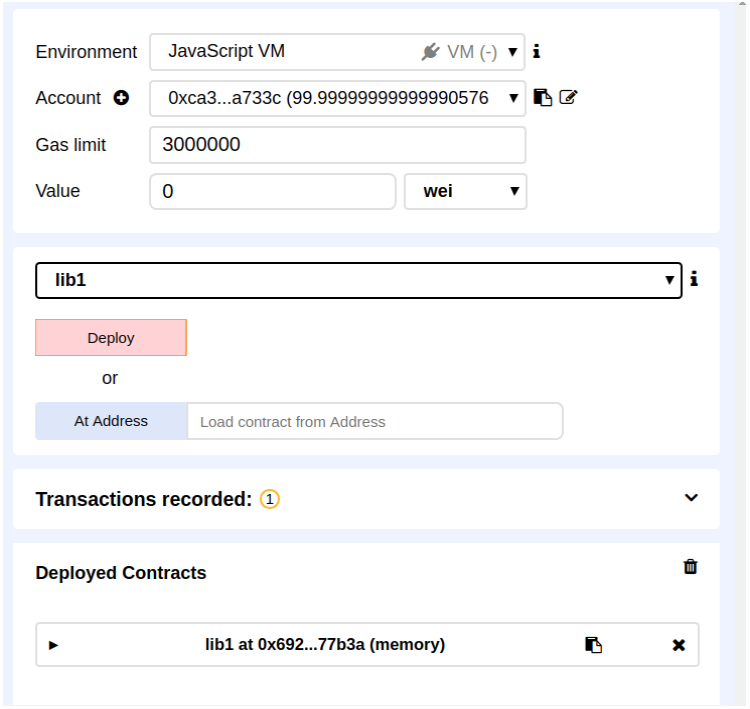
and that it is still possible to

automatically deploy the libraries.

```
{
    "deploy": {
        "VM:-": {
            "linkReferences": {
                "gist/sample.sol": {
                    "lib1": "<address>"
                }
            },
            "autoDeployLib": true
        },
        "main:1": {
            "linkReferences": {
                "gist/sample.sol": {
                    "lib1": "<address>"
                }
            },
            "autoDeployLib": true
        },
        "ropsten:3": {
            "linkReferences": {
                "gist/sample.sol": {
                    "lib1": "<address>"
                }
            },
            "autoDeployLib": true
        },
        "rinkeby:4": {
            "linkReferences": {
                "gist/sample.sol": {
                    "lib1": "<address>"
                }
            },
            "autoDeployLib": true
        },
```

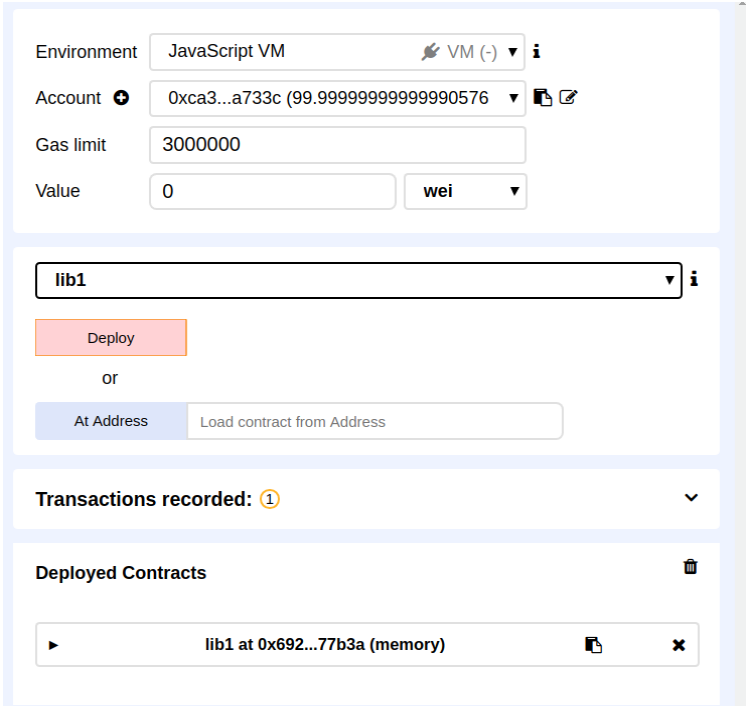
Deploy with libraries

Start compiling and in the “Run” tab, deploy the library.



Deploy with libraries

Start compiling and in the “Run” tab, deploy the library.



Deploy with libraries

Copy the library address and use it for specifying the address in the metadata file.

Note that the network should match the one you are actually connected to.
In the above example, we use the “JavaScript VM”.

Deploy with libraries

Compile Sample.json and deploy it. You can check that Remix is correctly linking the library