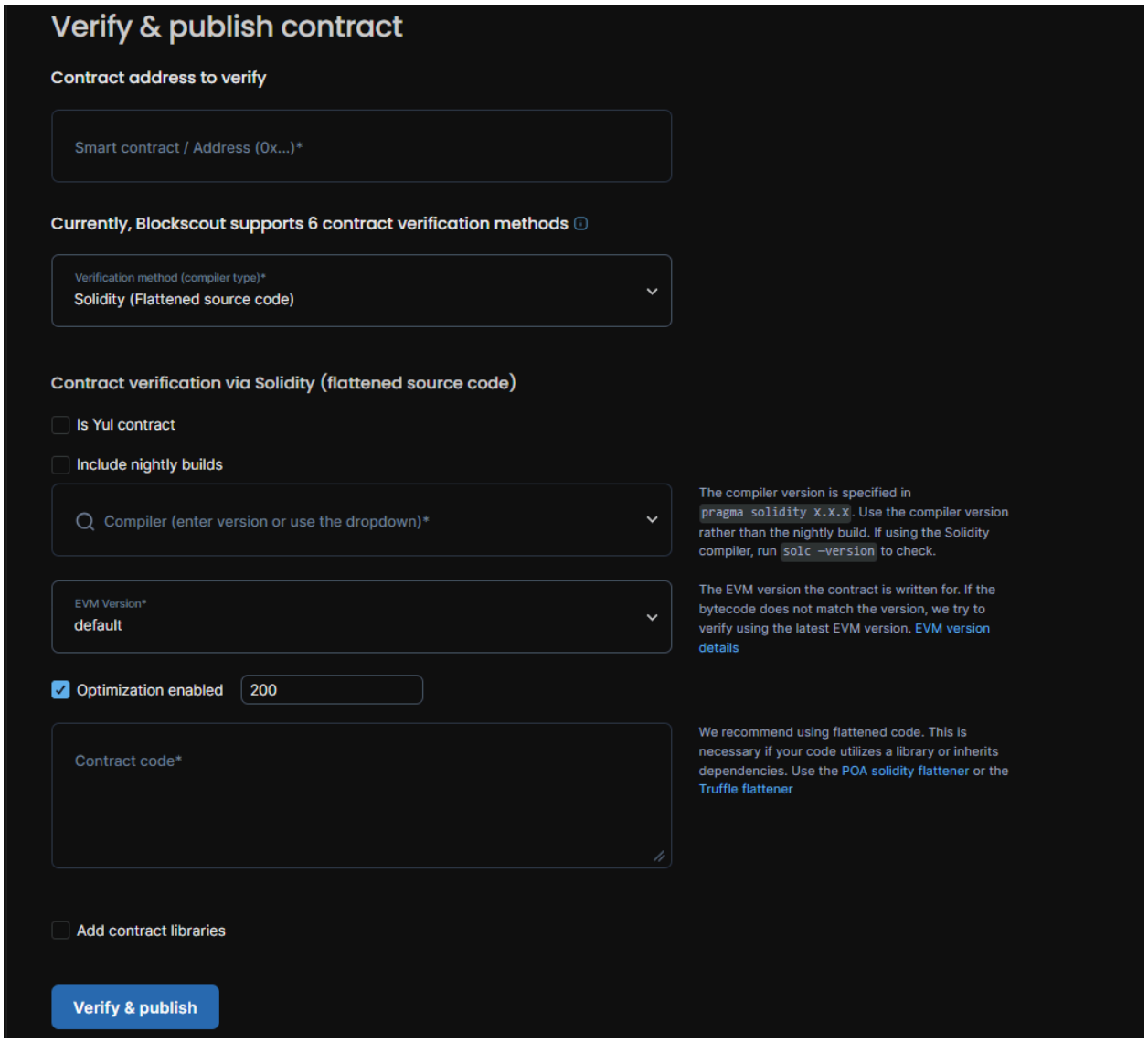
Verify Contracts

Once verified, a smart contract or token contract's source code becomes publicly available and verifiable, creating transparency and trust.
There are several ways to verify a contract, programmatically or manually on the UI.

Verify on the UI

1. Go the the verify contract page (Other -> Verify Contract)
2. Enter in the contract address you received during deployment. The dropdown will show you several available verification options. Select the one you would like to use and continue.
    i. Solidity (Flattended source code)
    ii. Solidity (Standard JSON Input)

Solidity (Flattened Source Code)



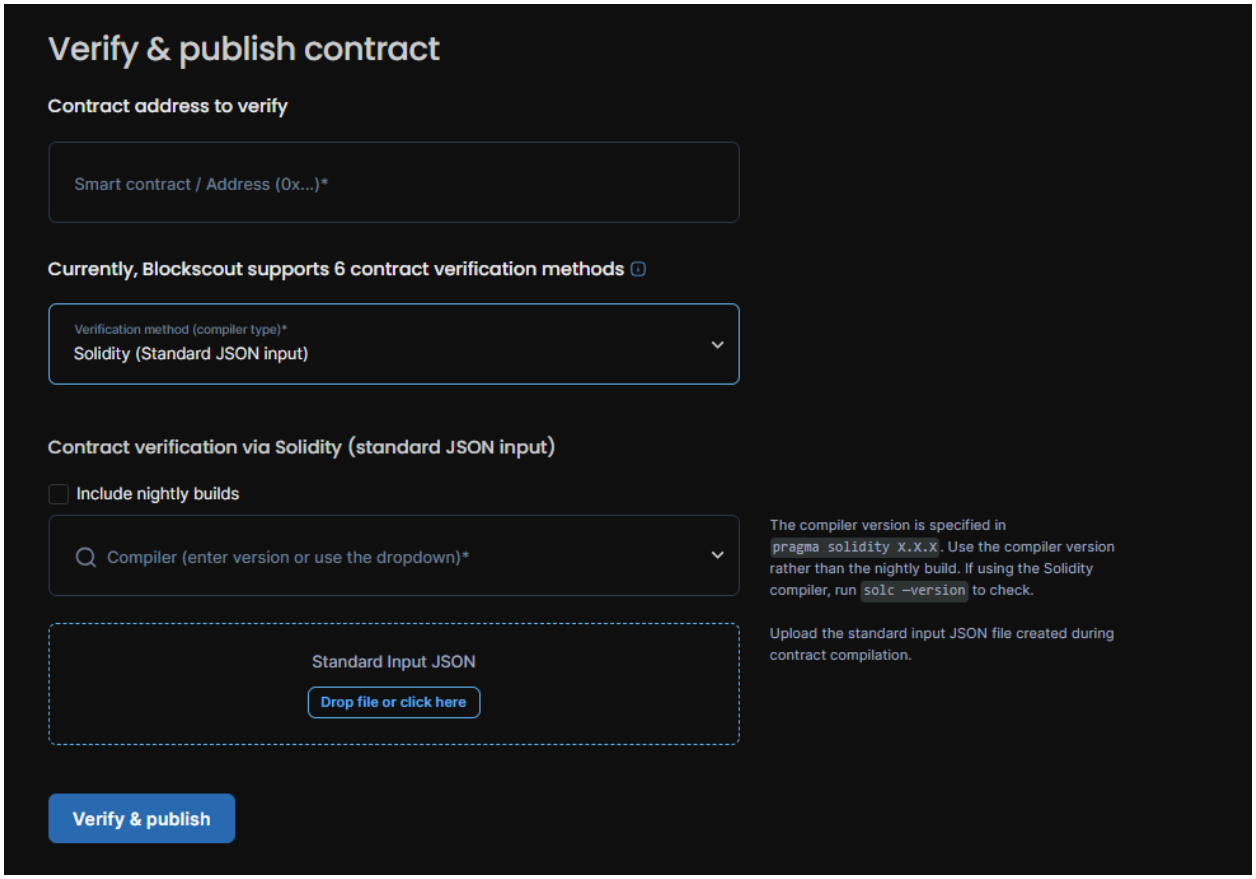
1. Contract Address: The 0x address supplied on contract creation (added above)
2. Is Yul Contract: Select if the contract is coded in Yul for efficiency.
3. Include Nightly Builds: Select if you want to show nightly builds.
4. Compiler: derived from the first line in the contract pragma solidity X.X.X. Use the corresponding compiler version rather than the nightly build.
5. EVM Version: Select the correct EVM version if known, otherwise use default.
6. EVM Version: Select the correct EVM version if known, otherwise use default.
7. Enter the Solidity Contract Code: You may need to flatten your solidity code if it utilizes a library or inherits dependencies from another contract. We recommend hardhat or the POA solidity flattener. To flatten your contract using contract, run:

yarn hardhat flatten .\contracts\<your-contract>.sol > flattened.sol

8. Add Contract Libraries: Enter the name and 0x address for any required libraries called in the .sol file. You can add multiple contracts with the "+" button.

9. Click the Verify and Publish button.
10. If all goes well, you will see a checkmark next to Code in the code tab, and an additional tab called Read Contract. The contract name will now appear in BlockScout with any transactions related to your contract.

Solidity (Standard JSON Input)



1. Include nightly builds. You can choose Yes or No depending on your compiler.
2. Compiler. Choose the compiler version used to compile your smart contract. If you selected yes for nightly builds, use the compiler version rather than the build.
3. Standard Input JSON. Upload your Standard Input JSON file. File should follows solidity format and all the sources must be in Literal Content format, not a URL.

Click the Verify & publish button and wait for the response.

Verify Programmatically

To verify contracts please follow the Verifying a Smart Contract guide to learn the different options.
In particular, to be able to verify the contracts programatically we will need following steps:
1- Install @nomiclabs/hardhat-etherscan package:
yarn add --dev @nomiclabs/hardhat-etherscan
2- Import into hardhat.config.ts

```
import "@nomiclabs/hardhat-etherscan";
```

3- Update hardhat.config.ts following:

```
    apiKey: {
     opencampus: "XXX", // no key required
   },
   customChains: [
     {
       network: "opencampus",
       chainId: 656476,
       urls: {
         apiURL: "https://opencampus-codex.blockscout.com/api",
         browserURL: "https://opencampus-codex.blockscout.com/",
       },
     },
   ],
```

4- Verify the contract Once the config is updated, you can verofy the contract with

```
npx hardhat verify --network opencampus YOUR-CONTRACT-ADDRESS
YOUR-CONSTRUCTOR-ARGUMENTS
```

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