Contract

?module=contract

https://instance_base_url/api?module=contract

Get a list of contracts

listcontracts

List sorted in ascending order based on the time a contact was first indexed by the explorer. With filters not_decompiled(4) or not_verified(4) the results will not be sorted for performance reasons.

Example:

```

Copy https://instance_base_url/api ?module=contract &action=listcontracts

```

Request Params Example Result Parameter Description page optional nonnegativeinteger representing the page number used for pagination. 'offset' must also be provided. offset optional nonnegativeinteger representing the max number of records to return when paginating. 'page' must also be provided. filter optional stringverified |decompiled |unverified |not_decompiled |empty , or1 |2 |3 |4 |5 respectively. Returns contracts with the requested status. not_decompiled_with_version optional string ensures none of the returned contracts were decompiled with the provided version. Ignored unless filtering fordecompiled contracts. verified_at_start_timestamp optional unix timestamp Represents the starting timestamp for verified contracts. Only used withverified filter. verified_at_end_timestamp optional unix timestamp Represents the ending timestamp for verified contracts. Only used withverified filter. ```

Copy { "message":"OK", "result":[{ "ABI": "[{\n\"type\":\"event\",\n\"inputs\": [{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true}, {\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event\"\n}, {\n\"type\":\"event\",\n\"inputs\": [{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true}, {\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event2\"\n}, {\n\"type\":\"function\",\n\"inputs\": [{\"name\":\"a\",\"type\":\"uint256\"}],\n\"name\":\"foo\",\n\"outputs\": []\n}]\n", "CompilerVersion":"v0.2.1-2016-01-30-91a6b35", "ContractName":"Test", "OptimizationUsed":"1", "SourceCode": "pragma solidity >0.4.24;\n\ncontract Test {\nconstructor() public { b = hex\"12345678901234567890123456789012\"; }\nevent Event(uint indexed a, bytes32 b);\nevent Event2(uint indexed a, bytes32 b);\nfunction foo(uint a) public { emit Event(a, b); }\nbytes32 b;\n}\n" }], "status":"1" }

```

Get ABI for a verified contract

getabi

Also available through a GraphQLaddresses query.

Example:

```

Copy https://instance_base_url/api ?module=contract &action=getabi &address={addressHash}

```

Request Params Example Result Parameter Description address string containing the address hash. ```

Copy { "message": "OK", "result": "[{\"constant\":false,\"inputs\": [{\"name\":\"voucher_token\",\"type\":\"bytes32\"}],\"name\":\"burn\",\"outputs\": [{\"name\":\"success\",\"type\":\"bool\"}],\"payable\":false,\"stateMutability\":\"nonpayable\",\"type\":\"function\"}, {\"constant\":true,\"inputs\":[{\"name\":\"voucher_token\",\"type\":\"bytes32\"}],\"name\":\"is_expired\",\"outputs\": [{\"name\":\"\",\"type\":\"bool\"}],\"payable\":false,\"stateMutability\":\"view\",\"type\":\"function\"},{\"constant\":false,\"inputs\": [{\"name\":\"voucher_token\",\"type\":\"bytes32\"}],\"name\":\"is_burnt\",\"outputs\": [{\"name\":\"\",\"type\":\"bool\"}],\"payable\":false,\"stateMutability\":\"nonpayable\",\"type\":\"function\"},{\"inputs\": [{\"name\":\"voucher_token\",\"type\":\"bytes32\"}, {\"name\":\"_lifetime\",\"type\":\"uint256\"}],\"payable\":false,\"stateMutability\":\"nonpayable\",\"type\":\"constructor\"}]", "status": "1" }

```

Get contract source code for a verified contract

getsourcecode

Also available through a GraphQLaddresses query.

Example:

```

Copy https://instance_base_url/api ?module=contract &action=getsourcecode &address={addressHash}

```

Request Params Example Result Parameter Description address string containing the address hash. ```

Copy { "message": "OK", "result": { "ABI": "[{\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event\"\n}, {\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event2\"\n}, {\n\"type\":\"function\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\"}],\n\"name\":\"foo\",\n\"outputs\": []\n}]\n", "CompilerVersion": "v0.2.1-2016-01-30-
91a6b35", "ContractName": "Test", "FileName": "{sourcify path or empty}", "ImplementationAddress":
"0x000000000000000000000000000000000000000e", "IsProxy": "true", "OptimizationUsed": "1", "SourceCode": "pragma
solidity >0.4.24;\n\ncontract Test {\nconstructor() public { b = hex\"12345678901234567890123456789012\"; }\nevent
Event(uint indexed a, bytes32 b);\nevent Event2(uint indexed a, bytes32 b);\nfunction foo(uint a) public { emit Event(a, b);
}\nbytes32 b;\n}\n" }, "status": "1" }

```

Get contract creator address hash and creation transaction hash

getcontractcreation

Returns contract creator and transaction hash. Up to 10 contracts at the one request

Example:

```

Copy https://instance_base_url/api ?module=contract &action=getcontractcreation &contractaddresses={addressHash},
{addressHash}

```

Request Params Example Result Parameter Description contractaddresses string containing address hashes, separated by,
```

Copy { "message": "OK", "result": [{ "contractAddress": "0xdc2082945d55596bf39f362d9ec0f7f65edbb9dd",
"contractCreator": "0xbb36c792b9b45aaf8b848a1392b0d6559202729e", "txHash":
"0xe79426c9a5560cfbd78d0ef058e455c94483224ec265475583ff01ebdedceaf2" }, { "contractAddress":
"0x1b02da8cb0d097eb8d57a175b88c7d8b47997506", "contractCreator":
"0xf87bc5535602077d340806d71f805ea9907a843d", "txHash":
"0xe54bf38dfad760b8f96a76d8136d6540d74b02dafb5781746bf705bf7e647a3b" }], "status": "1" }

```

Verify a contract with its source code and contract creation information

verify

Example:

```

Copy https://instance_base_url/api ?module=contract &action=verify &addressHash={addressHash} &name={name}
&compilerVersion={compilerVersion} &optimization={false} &contractSourceCode={contractSourceCode}

```

Curl Post Example
```

```

Copy curl -d
'{"addressHash":"0xc63BB6555C90846afACaC08A0F0Aa5caFCB382a1","compilerVersion":"v0.5.4+commit.9549d8ff",
"contractSourceCode":"pragma solidity ^0.5.4; contract Test { }","name":"Test","optimization":false}' -H "Content-Type:
application/json" -X POST "https://blockscout.com/poa/sokol/api?module=contract&action=verify"

```

On successful submission you will receive a guid as a receipt. Use this with checkverifystatus to view verification status. Params Example Result Parameter Description addressHash string containing the address hash of the contract. name string containing the name of the contract. compilerVersion string containing the compiler version for the contract. optimization enum whether or not compiler optimizations were enabled0 =false,1 =true contractSourceCode string containing the source code of the contract. constructorArguments optional string constructor argument data provided. autodetectConstructorArguments optional boolean whether or not automatically detect constructor argument. evmVersion optional EVM version for the contract. optimizationRuns optional number of optimization runs used during compilation library1Name optional string name of the first library used. library1Address optional string address of the first library used. library2Name optional string name of the second library used. library2Address optional string address of the second library used. library3Name optional string name of the third library used. library3Address optional string address of the third library used. library4Name optional string name of the fourth library used. library4Address optional string address of the fourth library used. library5Name optional string name of the fifth library used. library5Address optional string address of the fifth library used. ```

Copy { "message": "OK", "result": { "ABI": "[{\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event\"\n}, {\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event2\"\n}, {\n\"type\":\"function\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\"}],\n\"name\":\"foo\",\n\"outputs\": []\n}]\n", "CompilerVersion": "v0.2.1-2016-01-30-
91a6b35", "ContractName": "Test", "ImplementationAddress": "0x000000000000000000000000000000000000000e",
"IsProxy": "true", "OptimizationUsed": "1", "SourceCode": "pragma solidity >0.4.24;\n\ncontract Test {\nconstructor() public {
b = hex\"12345678901234567890123456789012\"; }\nevent Event(uint indexed a, bytes32 b);\nevent Event2(uint indexed a,
bytes32 b);\nfunction foo(uint a) public { emit Event(a, b); }\nbytes32 b;\n}\n" }, "status": "1" }

```

Verify a contract throughSourcify

verify_via_sourcify

1. if a smart contract is already verified on Sourcify, it will automatically fetch the data from the repo
2. otherwise you need to upload source files and JSON metadata file(s).
3.

Example:

```

Copy https://instance_base_url/api ?module=contract &action=verify_via_sourcify &addressHash={addressHash}

```

POST body example

```

Copy --6e1e4c11657c62dc1e4349d024de9e28 Content-Disposition: form-data; name="addressHash"

0xb77b7443e0F32F1FEBf0BE0fBd7124D135d0a525

--6e1e4c11657c62dc1e4349d024de9e28 Content-Disposition: form-data; name="files[0]"; filename="contract.sol" Content-
Type: application/json

...Source code...

--6e1e4c11657c62dc1e4349d024de9e28 Content-Disposition: form-data; name="files[1]"; filename="metadata.json"
Content-Type: application/json

...JSON metadata...

--6e1e4c11657c62dc1e4349d024de9e28--

```

Params Example Parameter Description addressHash string containing the address hash. files array with sources and metadata files ```

Copy { "message": "OK", "result": { "ABI": "[{\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event\"\n}, {\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event2\"\n}, {\n\"type\":\"function\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\"}],\n\"name\":\"foo\",\n\"outputs\": []\n}]\n", "CompilerVersion": "v0.2.1-2016-01-30-
91a6b35", "ContractName": "Test", "ImplementationAddress": "0x000000000000000000000000000000000000000e",
"IsProxy": "true", "OptimizationUsed": "1", "SourceCode": "pragma solidity >0.4.24;\n\ncontract Test {\nconstructor() public {
b = hex\"12345678901234567890123456789012\"; }\nevent Event(uint indexed a, bytes32 b);\nevent Event2(uint indexed a,
bytes32 b);\nfunction foo(uint a) public { emit Event(a, b); }\nbytes32 b;\n}\n" }, "status": "1" }

```

Verify a vyper contract with its source code and contract creation information

verify_vyper_contract

Example

```

Copy https://instance_base_url/api ?module=contract &action=verify_vyper_contract &addressHash={addressHash}
&name={name} &compilerVersion={compilerVersion} &contractSourceCode={contractSourceCode}

```

curl POST example

```

Copy curl --location --request POST 'http://localhost:4000/api?module=contract&action=verify_vyper_contract' --form
'contractSourceCode="SOURCE_CODE"' --form 'name="Vyper_contract"' --form
'addressHash="0xE60B1B8bD493569a3E945be50A6c89d29a560Fa1"' --form 'compilerVersion="v0.2.12"'

```

First Tab Example Parameter Description addressHash string containing the address hash of the contract. name string containing the name of the contract. compilerVersion string containing the compiler version for the contract. contractSourceCode string containing the source code of the contract. constructorArguments string constructor argument data provided. ```

Copy { "message": "OK", "result": { "ABI": "[{\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event\"\n}, {\n\"type\":\"event\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\",\"indexed\":true},
{\"name\":\"b\",\"type\":\"bytes32\",\"indexed\":false}],\n\"name\":\"Event2\"\n}, {\n\"type\":\"function\",\n\"inputs\":
[{\"name\":\"a\",\"type\":\"uint256\"}],\n\"name\":\"foo\",\n\"outputs\": []\n}]\n", "CompilerVersion": "v0.2.1-2016-01-30-
91a6b35", "ContractName": "Test", "ImplementationAddress": "0x000000000000000000000000000000000000000e",
"IsProxy": "true", "OptimizationUsed": "1", "SourceCode": "pragma solidity >0.4.24;\n\ncontract Test {\nconstructor() public {
b = hex\"12345678901234567890123456789012\"; }\nevent Event(uint indexed a, bytes32 b);\nevent Event2(uint indexed a,
bytes32 b);\nfunction foo(uint a) public { emit Event(a, b); }\nbytes32 b;\n}\n" }, "status": "1" }

```

Verify a contract with Standard input JSON file

verifysourcecode

Example

```

Copy https://instance_base_url/api ?module=contract &action=verifysourcecode &codeformat={solidity-standard-json-input}
&contractaddress={contractaddress} &contractname={contractname} &compilerversion={compilerversion} &sourceCode=
{sourceCode}

```
```

solidity-single-file :

```

Copy curl --location 'localhost:4000/api?module=contract&action=verifysourcecode' \ --form 'contractaddress="0xDc2082945d55596bf39F362d9EC0F7F65eDBB9DD"' \ --form 'sourceCode="// SPDX-License-Identifier: GPL-3.0

pragma solidity >=0.7.0 <0.9.0;

contract Storage { uint256 number;

function store(uint256 num) public { number = num; }

function retrieve() public view returns (uint256){ return number; } }"' \ --form 'contractname="Storage"' \ --form 'codeformat="solidity-single-file"' \ --form 'compilerversion="v0.8.17+commit.8df45f5f"' \ --form 'optimizationUsed="1"' \ --form 'runs="199"' \ --form 'constructorArguements=""' \ --form 'evmversion="london"' \ --form 'libraryname1="qwe"' \ --form 'libraryaddress1="0xDc2082945d55596bf39F362d9EC0F7F65eDBB9DD"' --form 'licenseType=0'

```

Params Example Result Parameter Description codeformat Format of sourceCode (solidity-standard-json-input orsolidity-single-file) contractaddress string containing the address hash of the contract. contractname string name of the contract. It an be an empty string(""), just the contract name("ContractName"), or a filename and contract name("contracts/contract_1.sol:ContractName") compilerversion string containing the compiler version for the contract. sourceCode string standard input json or flattened solidity code optimizationUsed could be0 ,false ,1 ,true . Should be set whencodeformat=solidity-single-file runs integer is equal to optimization runs number set on compilation. Should be set whenoptimizationUsed is1 ortrue evmversion string EVM version. Should be set whencodeformat=solidity-single-file constructorArguments optional string constructor argument data provided. autodetectConstructorArguments optional boolean whether or not automatically detect constructor argument. licenseType string ornumber representing the license type.

License type

"Seeavailable license types ." ```

Copy { "message": "OK", "result": "b080b96bd06ad1c9341c2afb7e3730311388544961acde94", "status": "1" }

```

Return status of a verification attempt

checkverifystatus

guid is received as a receipt from theverifysourcecode method. Example

```

Copy https://instance_base_url/api ?module=contract &action=checkverifystatus &guid={identifierString}

```

Params Example Result Parameter Description guid string used for identifying verification attempt ```

Copy { "message": "OK", "result": "Pending in queue", "status": "1" }

```

Return Options:Pending in queue |Pass - Verified |Fail - Unable to verify |Unknown UID

Verify proxy contract

verifyproxycontract

Example

```

Copy https://instance_base_url/api ?module=contract &action=verifyproxycontract &address={addressHash}

```

Params Example Result Parameter Description address string containing the address hash of the contract ```

Copy { "message": "OK", "result": "c32d204404f33ff38fee42394f7e671fd96314b3658d466a", "status": "1" }

```

Return status of a proxy contract verification attempt

checkproxyverification

guid is received as a receipt from theverifyproxycontract method. Example

```

Copy https://instance_base_url/api ?module=contract &action=checkproxyverification &guid={identifierString}

```

Params Example Result Parameter Description guid string used for identifying verification attempt ```

Copy { "message": "OK", "result": "Implementation (0x5a3f40fd57731bbf62a38fd290add074e9cdb844) was verified and saved for proxy (0xc32d204404f33ff38fee42394f7e671fd96314b3)", "status": "1" }

```

Return Options:

- Verification in progress
- The proxy's ({addressHash}) implementation contract is found at {addressHash} and is successfully updated.
- A corresponding implementation contract was unfortunately not detected for the proxy address.
- Unknown UID *

Last updated2 months ago