

FisheyeOnBlockchain

System documentation

Version 1.0

This document is based on Systemdokumentasjon from NTNU. Revision, customizations and adaptations to use at IDER, DATA-INF done by Carsten Gunnar Helgesen, Svein-Ivar Lillehaug and Per Christian Engdal. The document is also available in Norwegian.

REVISION HISTORY

Date	Version	Description	Author
04.29.22	0.1	Added architecture.	Karl Kristen Gjølshjøl
05.8.22	0.2	Added source code.	Adrian Phillips, Karl Kristen Gjølshjøl
05.21.22	1	Added documentation.	Adrian Phillips, Karl Kristen Gjølshjøl

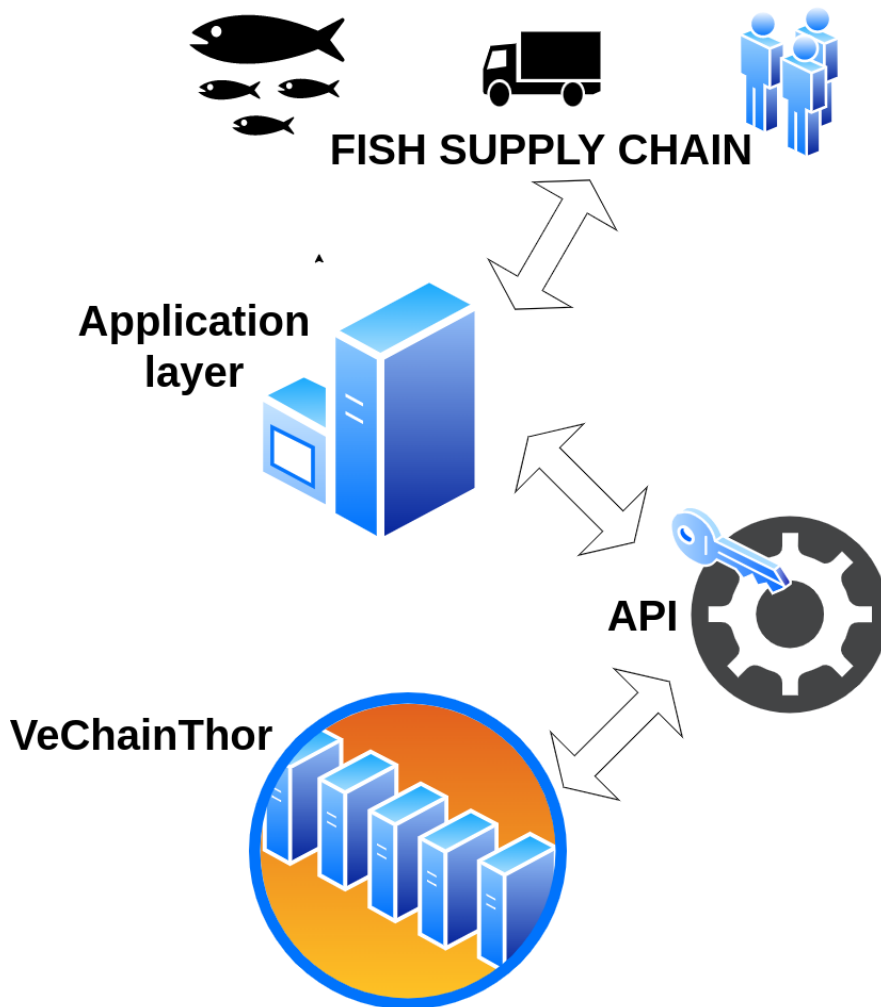
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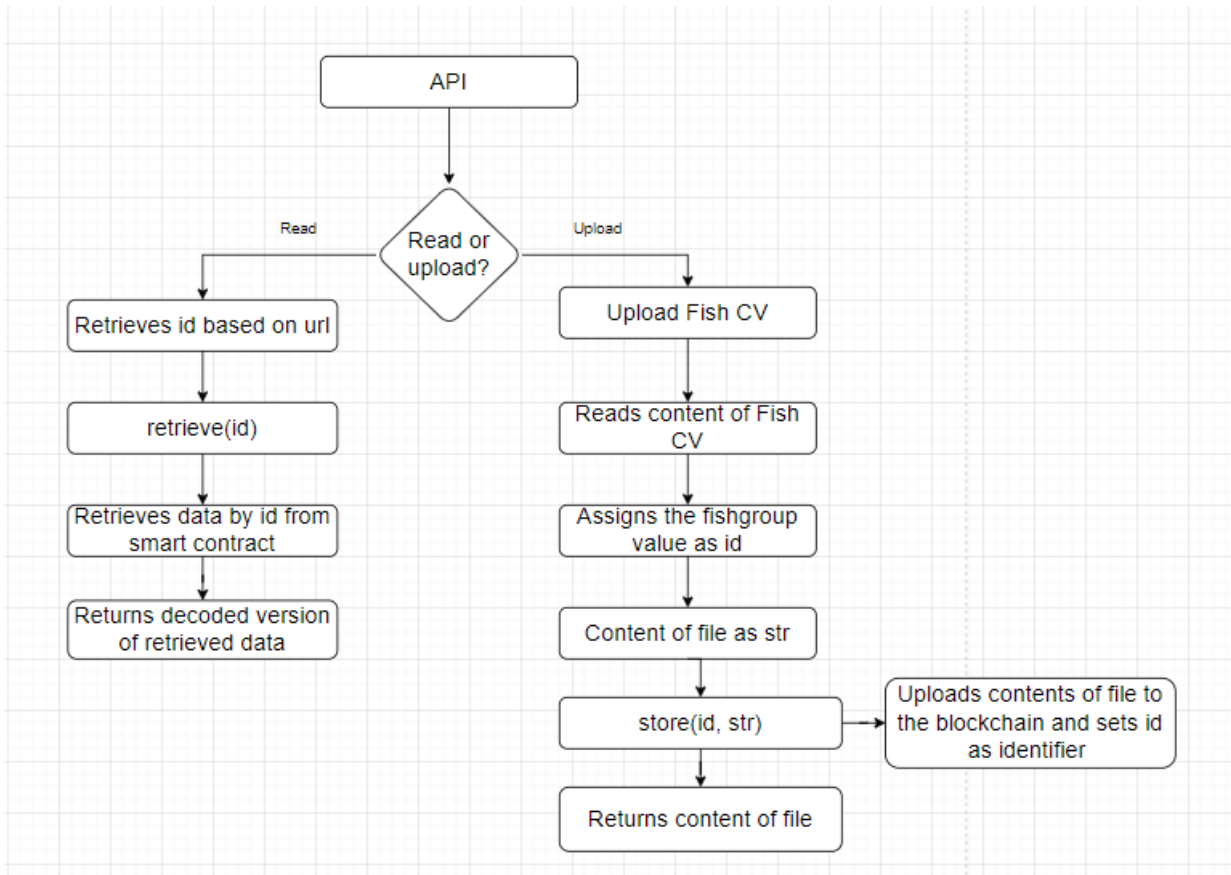
1 INTRODUCTION

This document contains relevant information for the Proof of Concept.

2 ARCHITECTURE



The architecture shows the relationships between the blockchain, the API, and the application layer, which provides the services to the customers.



3 SERVER SERVICES

HTTP METHOD	Endpoint	Description
Get	/fish/<fish_id>	Get information about the fish
Post	/fish	Create a fish cv

4 SECURITY

The private key for accessing the VeChain-wallet is accessible only through a local file instead of hard-coded into the program.

5 INSTALLATION AND EXECUTION

In this project, we have used the following libraries:

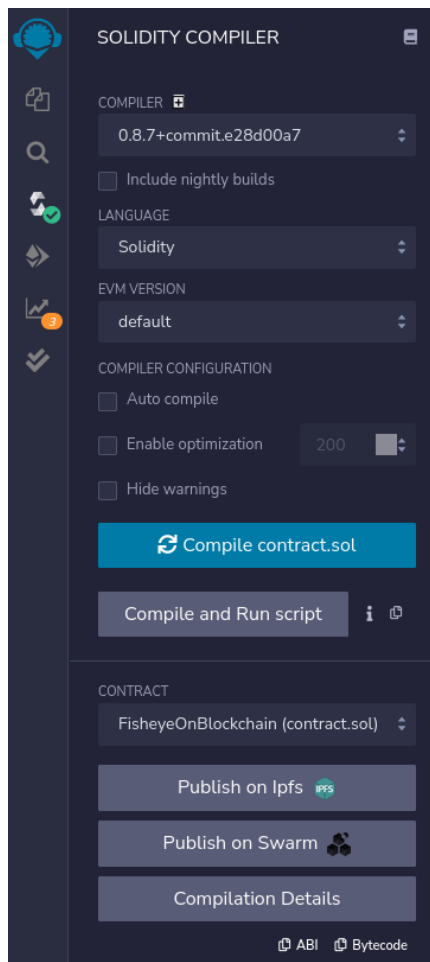
Thor_requests: <https://pypi.org/project/thor-requests/>

Flask: <https://pypi.org/project/Flask/>

5.1 Deploy the smart contract

- Get the Application Binary Interface, ABI, of the contract.

Byte code is retrieved from the smart contract compiler. In this case, “Remix – Ethereum IDE,” which is a web application:



Byte Code

```
0x608060405234801561001057600080fd5b5033600160006101000a81548173ffffffffffffffffffffffff021916908373ffffffff  
ffffffffffffffffffffffff16021790555061061a806100616000396000f3fe608060405234801561001057600080fd5b5060043610610036  
5760003560e01c806364cc73271461003b578063f641090c1461006b575b600080fd5b610055600480360381019061005091906102  
db565b610087565b604051610062919061041d565b60405180910390f35b61008560048036038101906100809190610324565b610  
137565b005b60606000826040516100999190610406655b908152602001604051809103902080546100b2906104fe565b80601f016  
02080910402602001604051908101604052809291908181526020018280546100de906104fe565b801561012b5780601f106101005  
761010080835404028352916020019161012b565b820191906000526020600020905b81548152906001019060200180831161010e  
57829003601f168201915b50505050509050919050565b600160009054906101000a900473ffffffffffffffffffffffff1673fffff  
ffffffffffffffffffffffff163373ffffffffffffffffffffffff161461019157600080fd5b806000836040516101a29190610406655b90  
8152602001604051809103902090805190602001906101c39291906101c8565b505050565b8280546101d4906104fe565b90600052
```

Vet

Valid Hex value (wei)

0x0

Valid Integer value (wei)

0

Send

Sync2 File Edit View Window

Test Net

Sign



Your signature is being requested

From DApp
<https://inspector.vecha.in>

Type
Transaction

Summary
Inspector deploy contract

Decline

Continue

Contract 0xEe00D1...56D7

Summary Transactions Transfers

Address	0xEe00D1f74f0049CC51b5C5e61774896fFa5356D7
VET	0,00 VET
VTHO	0,00 VTHO
Master	0x240edd80b222AA55cFEC32752687F41e40b5d00
Deployer	0x240edd80b222AA55cFEC32752687F41e40b5d00
Code	<pre>0x608060405234801561001057600080f5b50600436106100365760003560e01c806364cc73271461003b578063f641090c 1461006b575b600080fd5b610055600480360381019061005091906102db565b610087565b604051610062919061041d565b 60405180910390f35b61008560048036038101906100809190610324565b610137565b005b6066000826040516100999190 610406565b908152602001604051809103902080546100b2906104fe565b80601f0160208091040260200160405190810160 4052809291908181526020018280546100de906104fe565b801561012b5780601f1061010057610100808354040283529160 20019161012b565b820191906000526020600020905b81548152906001019060200180031161010e57829003601f16820191 5b505050509050919050565b600160009054906101000a900473fff1673ff ff1614610191576000</pre>

6 DOCUMENTATION AND SOURCE-CODE

Smart contract: <https://github.com/181207/FisheyeOnBlockchain/blob/main/contract.sol>

API: <https://github.com/586630/FishEye-on-blockchain>