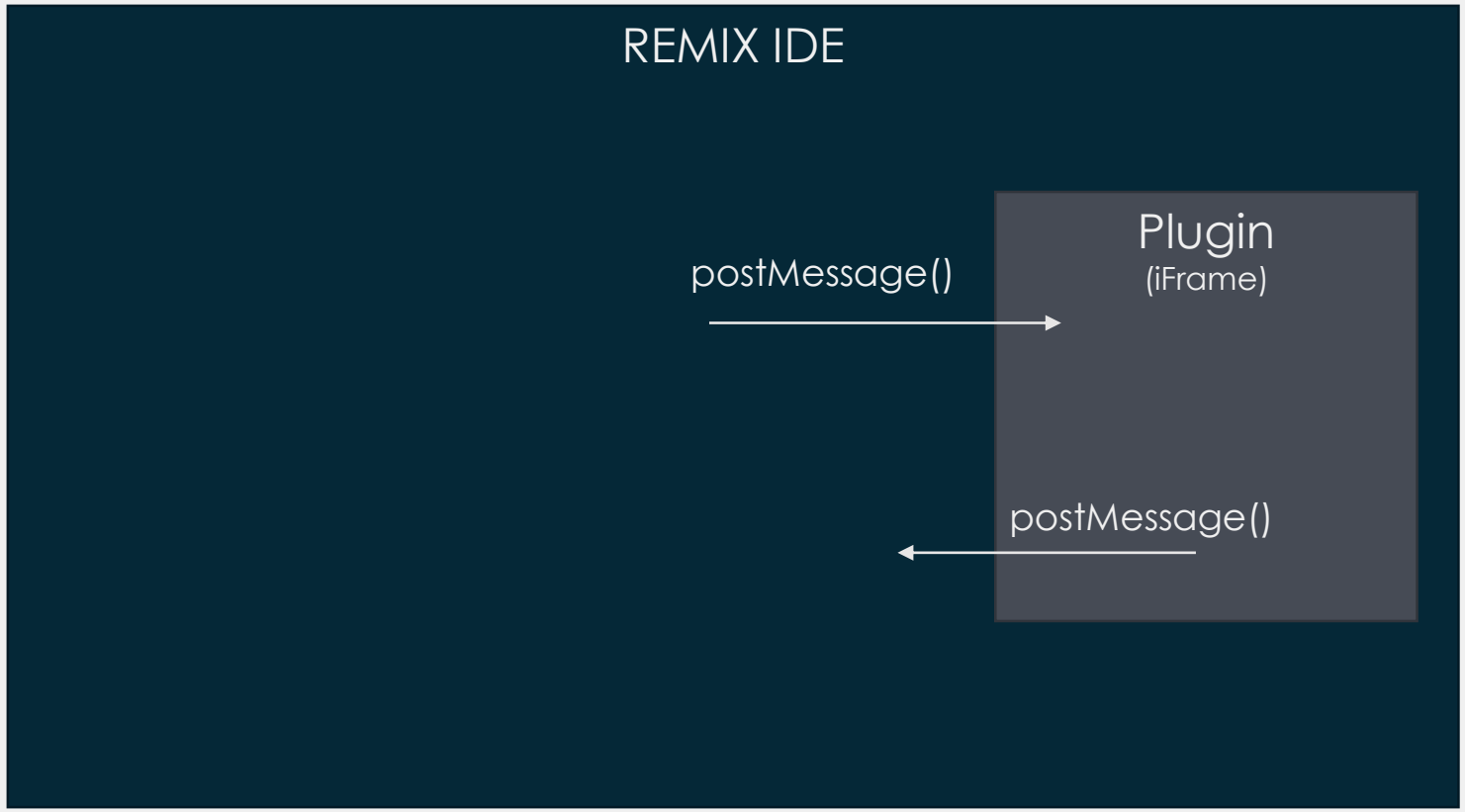
BUILD A PLUGIN FOR REMIX

Simple Plugin Hosted With Swarm

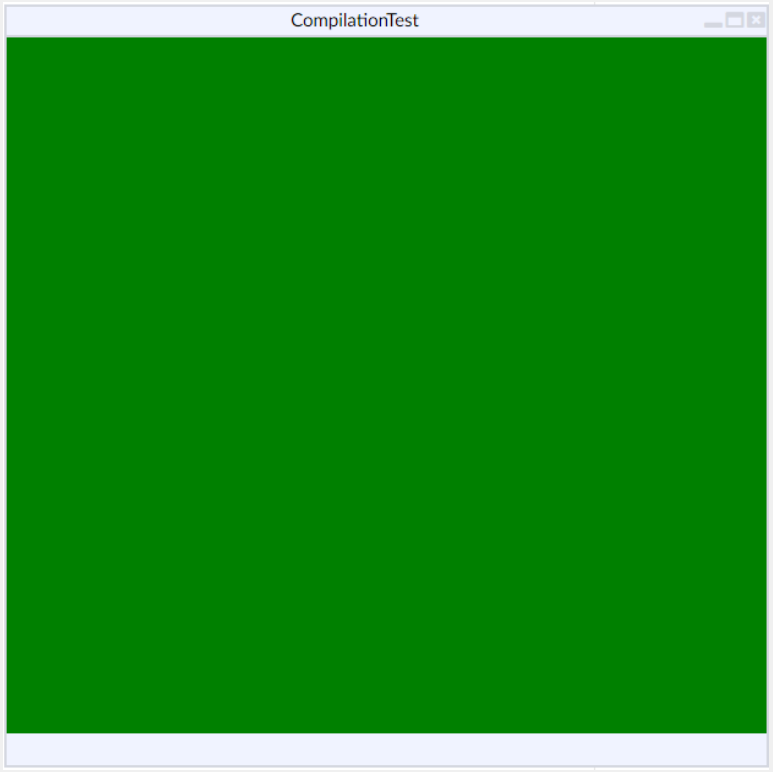
What is a Plugin ?



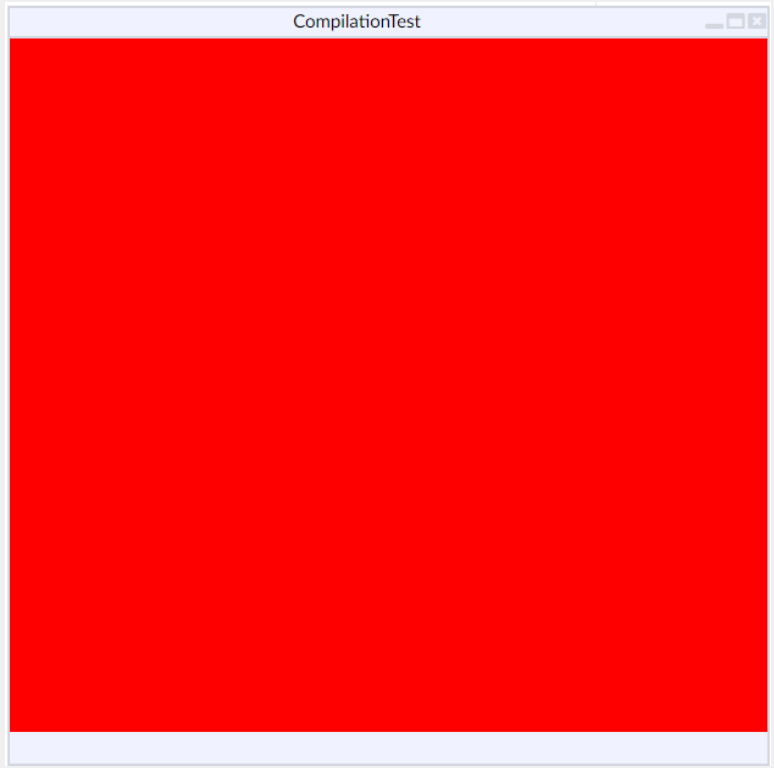
A Plugin is an Iframe loaded by Remix.

Communication is made with the PostMessage API

Our Goal



Compilation Succeed !



Compilation Failed !

Build and deploy a simple plugin that show green when compilation succeed, and red when compilation failed.

Index.html

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8" />
    <title>Simple Plugin</title>
</head>
<body>
</body>
<script>

</script>
</html>
```

Create a simple index.html file

Listen for messages

```
<script>
    const trustedOrigins = [
        "http://remix-alpha.ethereum.org",
        "http://remix.ethereum.org",
        "https://remix-alpha.ethereum.org",
        "https://remix.ethereum.org"
    ];
    // Listen to messages from Remix
    window.addEventListener('message', event => {
        // Only accept trusted origins
        if (trustedOrigins.indexOf(event.origin) === -1) {
                return;
        }
        const data = JSON.parse(event.data);
    }, false);
</script>
```

For security reason, we only accept trusted origins.
Then we parse the data from the message event.

Discover Remix Plugin API

The « event.data » object has 5 keys :

Key	Description
Action	can be a “notification”, “response” or “request”.
Key	where the message come from, or go to, in Remix.
Type	the type of message send.
Value	the content of the message (as a string).
id	the index of the message.

Discover Remix Plugin API (some examples)

Action	Key	Type
notification	compiler	compilationFinished
	txlistener	newTransaction
requests	config	getConfig
		setConfig
	compiler	getCompilationResult
	editor	getCurrentFile
		setFile
response	*Same than requests*	

Check all combinations here

Listen to compilationFinished

```
// Listen to messages from Remix
window.addEventListener('message', event => {
    // Only accept trusted origins
    if (trustedOrigins.indexOf(event.origin) === -1) {
        return;
    }
    const { type, value } = JSON.parse(event.data);
    // Listen to new compilation notification
    if (type === 'compilationFinished') {
        const success = value[0];
        document.body.style.backgroundColor = success ? 'green' : 'red';
    }
}, false);
```

The value of a compilationFinished message is an array with 2 entries.
The first one is a boolean which is true if compilation succeed

Note: compilationFinished is a « notification » action of key « compiler ».

Add some style

```
<style>
    html, body {
        height: 100%;
        margin: 0;
    }
</style>
```

Just add some css into you index.html

Deploy on Swarm

Download the swarm binary next to you index.html file.

Open your console and run :

```
swarm --bzzapi https://30400.swarm-gateways.net up index.html
```

It will return the hash of your file :

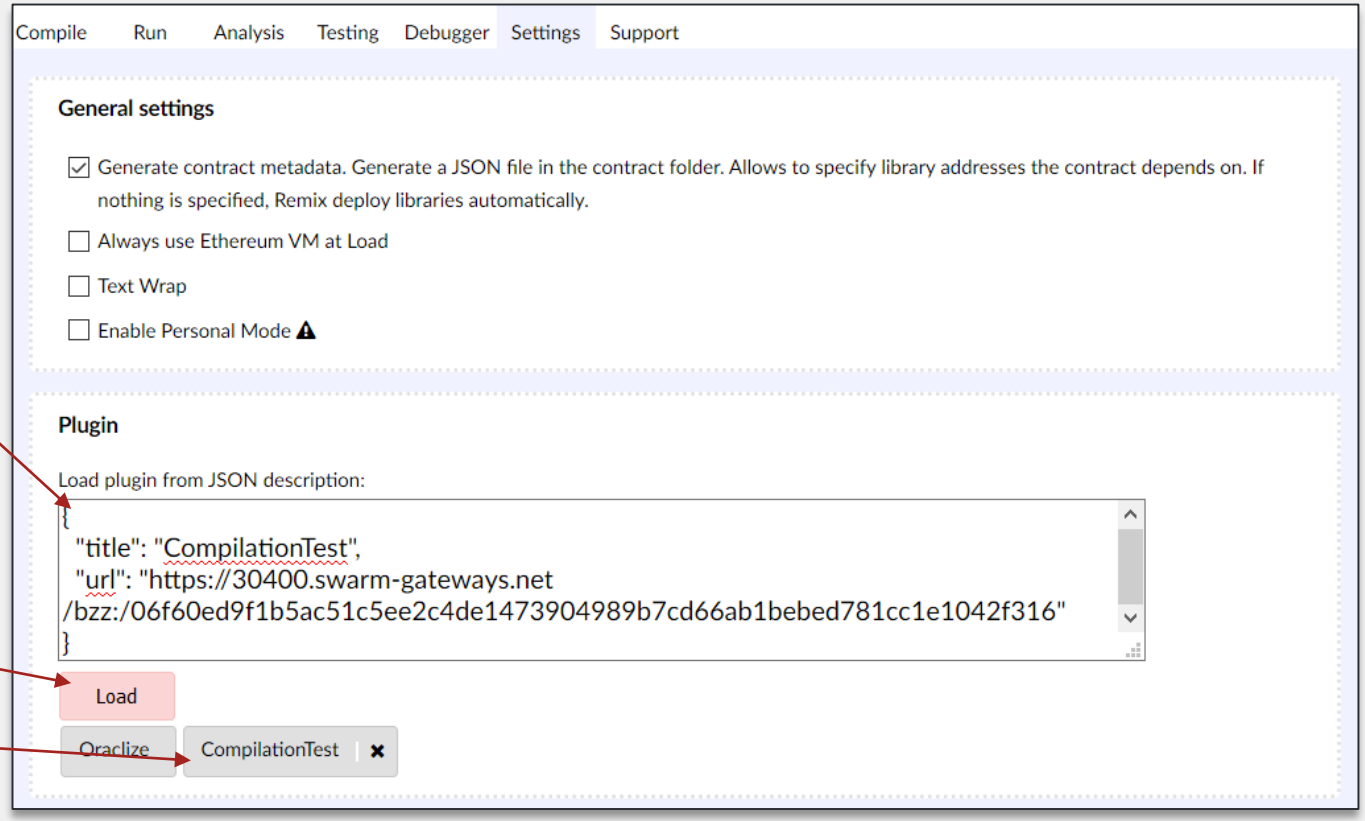
```
06f60ed9f1b5ac51c5ee2c4de1473904989b7cd66ab1bebed781cc1e1042f316
```

Use https://30400.swarm-gateways.net because it allows the result to be loaded inside an iframe.

Load on Remix

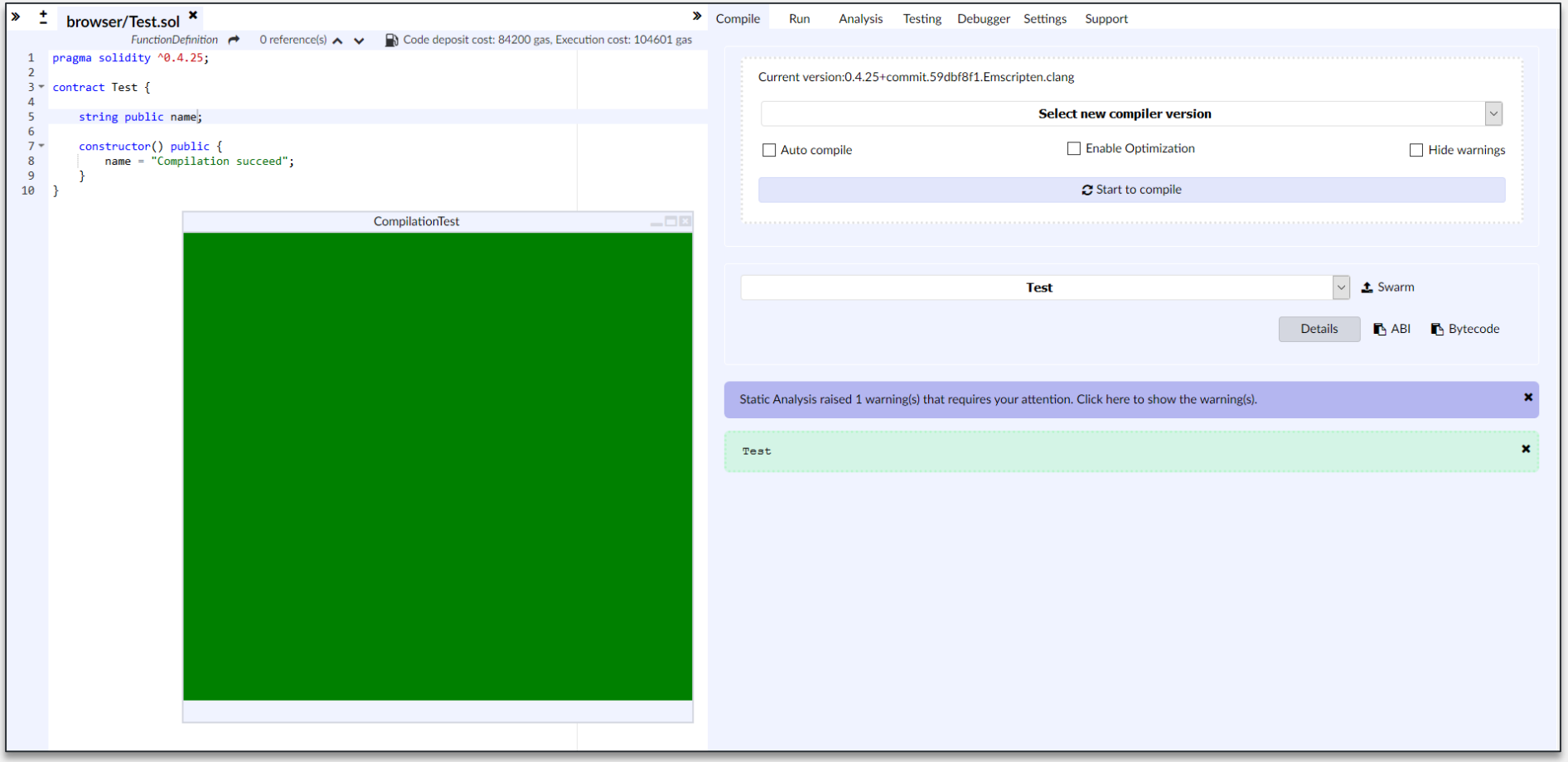
- Go to Remix, under settings > plugin add :

```
{
    "title": "CompilationTest",
    "url": "https://30400.swarm-
    gateways.net/bzz:/06f60ed9f1b5ac51c5e
    e2c4de1473904989b7cd66ab1bebed781cc1e
    1042f316"
}
```



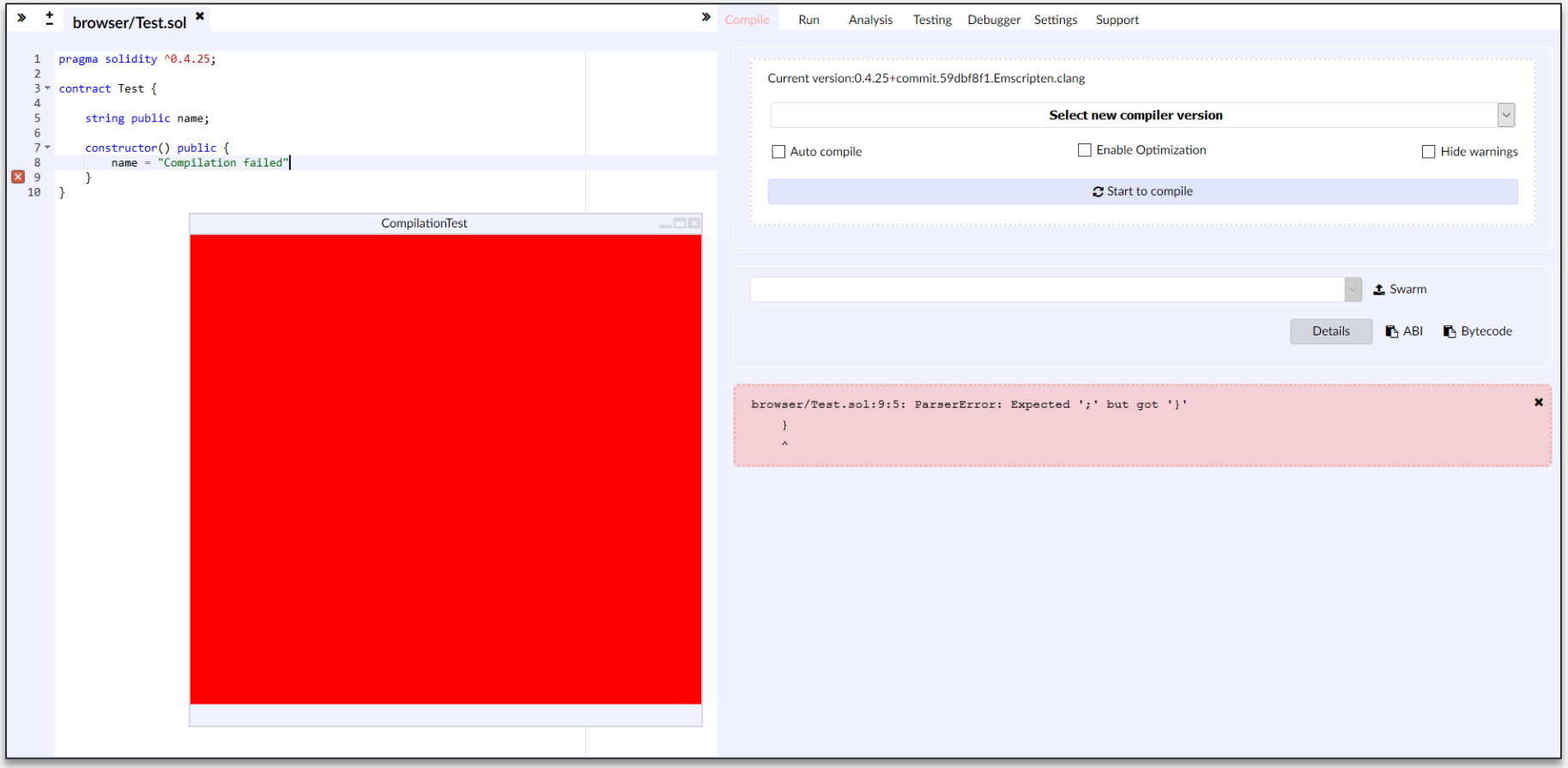
- Click « Load »
- And open your plugin

Compile a contract (succeed)



Compilation Succeed !

Compile a contract (failed)



Compilation Failed !