Lab: Use Different Blockchain-Networks

Prerequisites

1. Chrome or Firefox browser.
2. An Internet connection
3. MetaMask Plugin connected to the Test-Net from the previous Lab
4. Some Funds in your Account

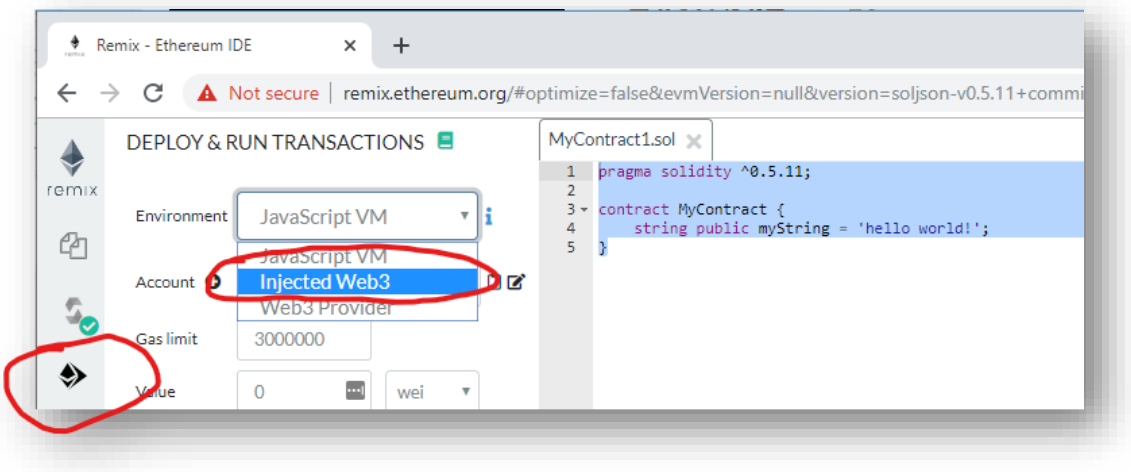
This document was updated in March 2020 to reflect latest changes in Solidity and Remix

Add the following Smart Contract in Remix:

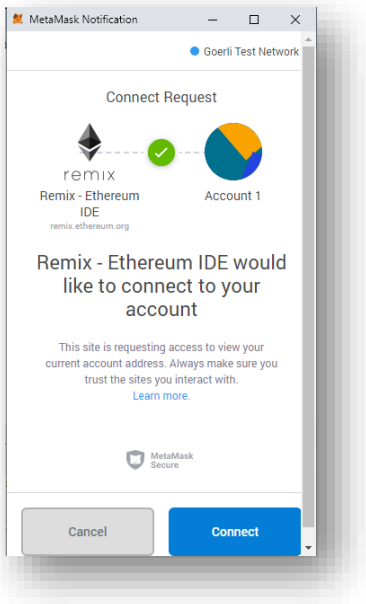
```
pragma solidity ^0.6.0;

contract MyContract {
    string public myString = 'hello world!';
}
```

Step by Step Instruction

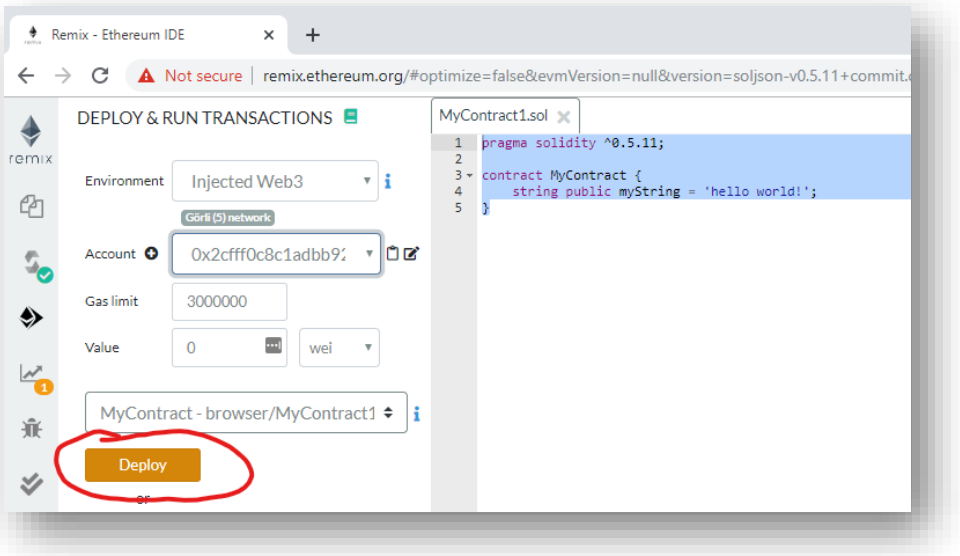
Deploy the Smart Contract to a Real Blockchain



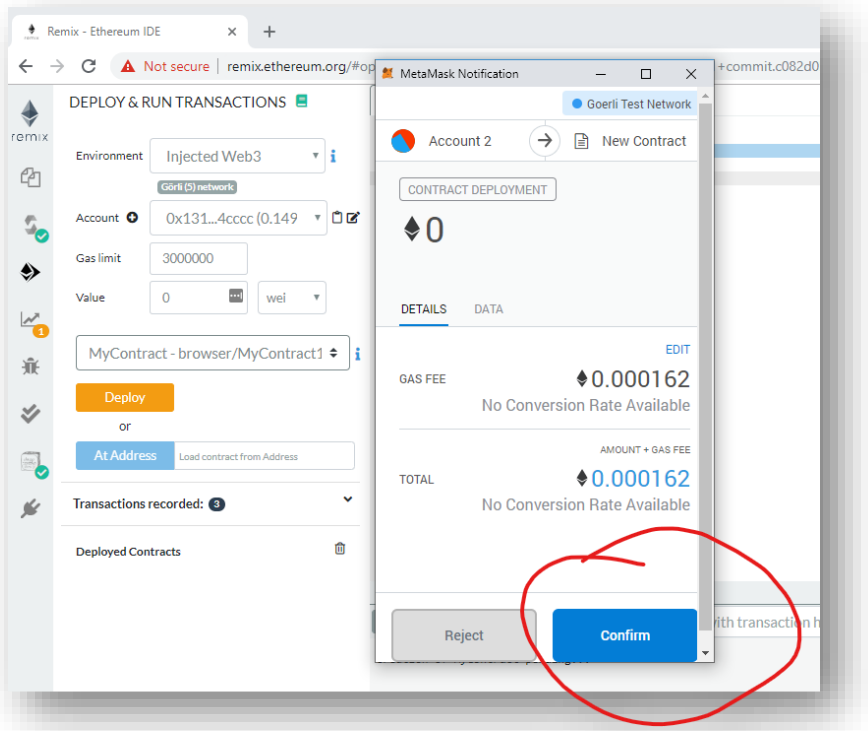
Connect MetaMask to Remix



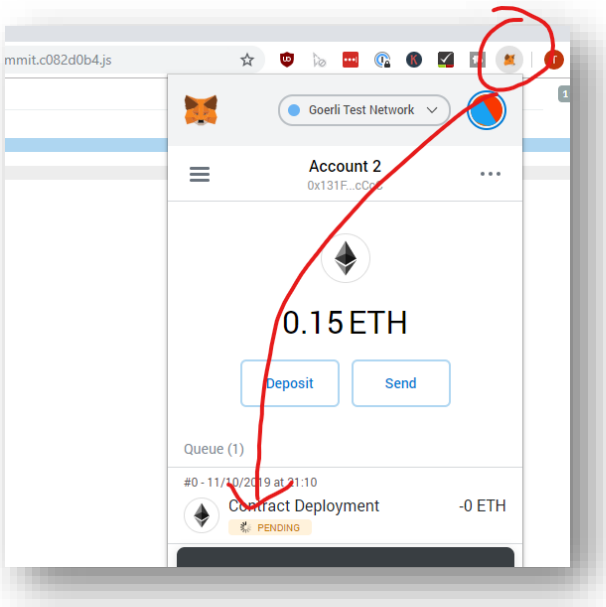
Deploy the Smart Contract:

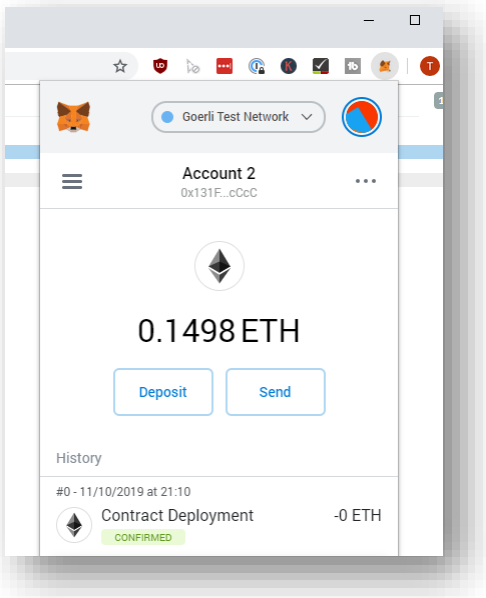


Confirm the Transaction:

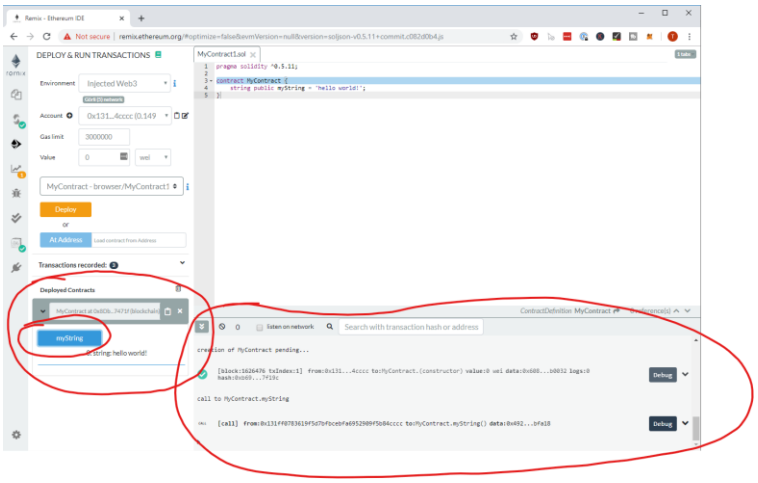


Wait until the Transaction comes up as "Confirmed":





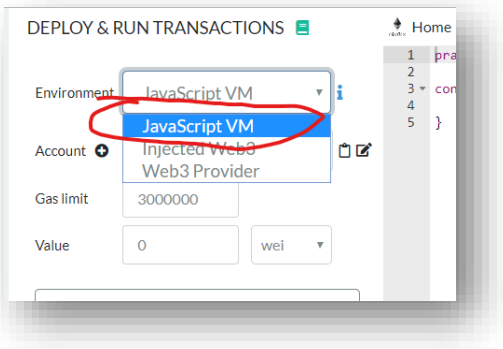
Interact with your new Smart Contract:



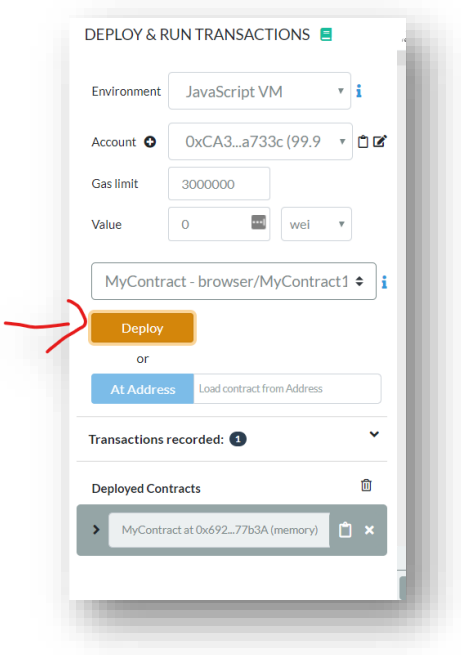
This takes time and is cumbersome. There is a better way to do that.

There are developer blockchains – made for quickly developing “stuff” without actual participants or mining overhead.

Change the Environment to JavaScript VM



Deploy the Smart Contract

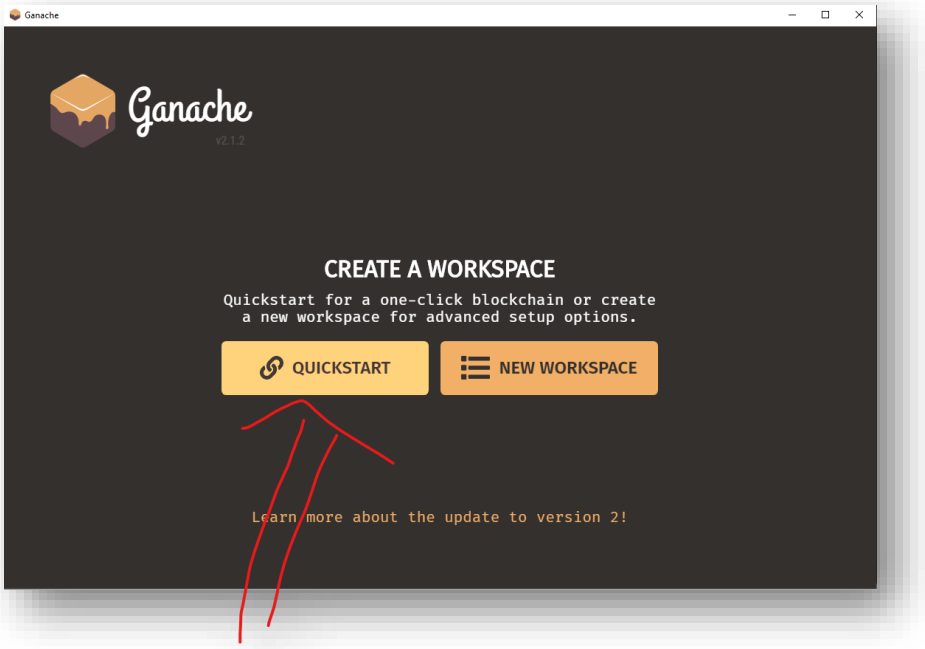


No MetaMask window pops up and also no time to wait until the transaction is mined. Very handy for a blockchain developer.

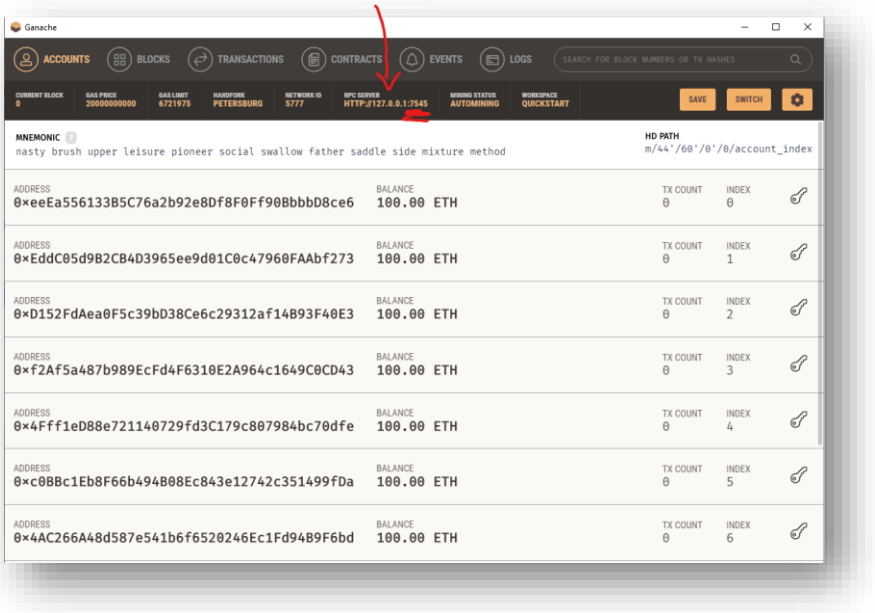
But also, it's hard, because you can't really look into the current blocks, there is no overview or something similar. Everything is in the browser.

Download Ganache and run "Quickstart"

Go to https://www.trufflesuite.com/ganache and download Ganache for your Operating System. I am downloading it for Windows…

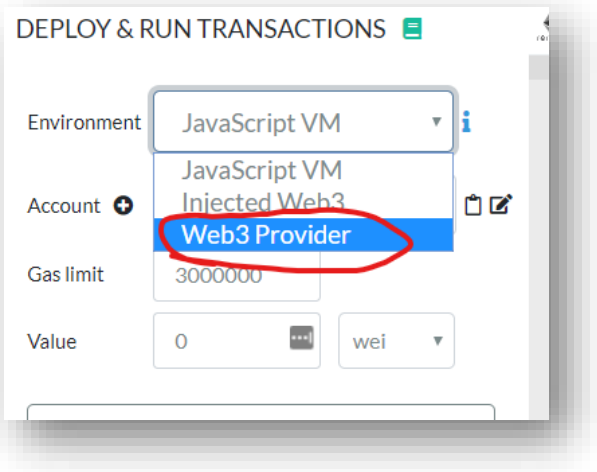


Wait until it spins up a local dev-blockchain

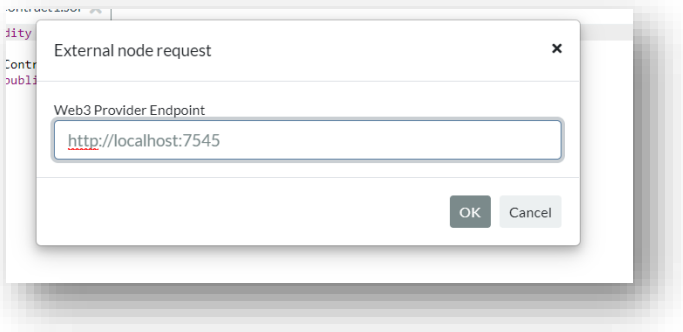


Remember the address and the port.

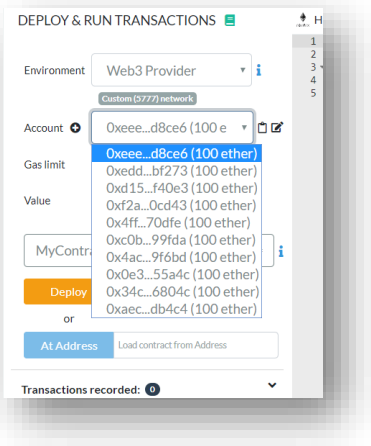
Connect your browser directly to Ganache



And enter the address + the port from ganache:

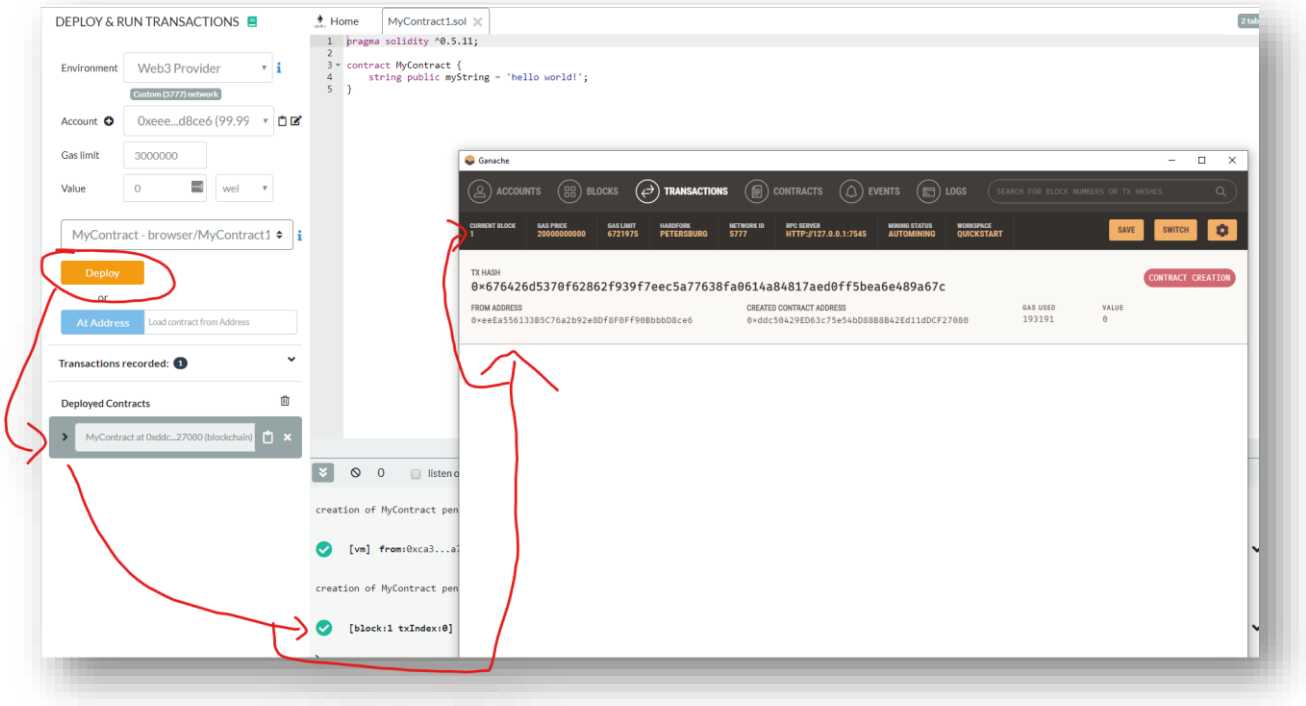


Observe that the accounts-dropdown has the same accounts as Ganache.



Deploy your smart contract to Ganache

Also observe that a transaction sent to Ganache let's you dig deeper into the actual transaction data:



Going forward it's probably best to use either the JavaScript VM or Web3 Provider with Ganache. The choice is yours, whatever you prefer. For ease of use, I'll use the JavaScript VM throughout the rest of this section.

Congratulations, LAB is completed