

The objective of SOSCI is to enable users of oscilloscope a way to gain access to all the features and possibilities through a software that can be done through a hardware oscilloscope and beyond. Our vision is to create a method that would better everyday life of engineers.



Display numerical data streams in real time over the network. No need for additional hardware.



Have a detailed look into your signals by adapting sweep speeds, amplitude and offset in real time.

Not dev Dev



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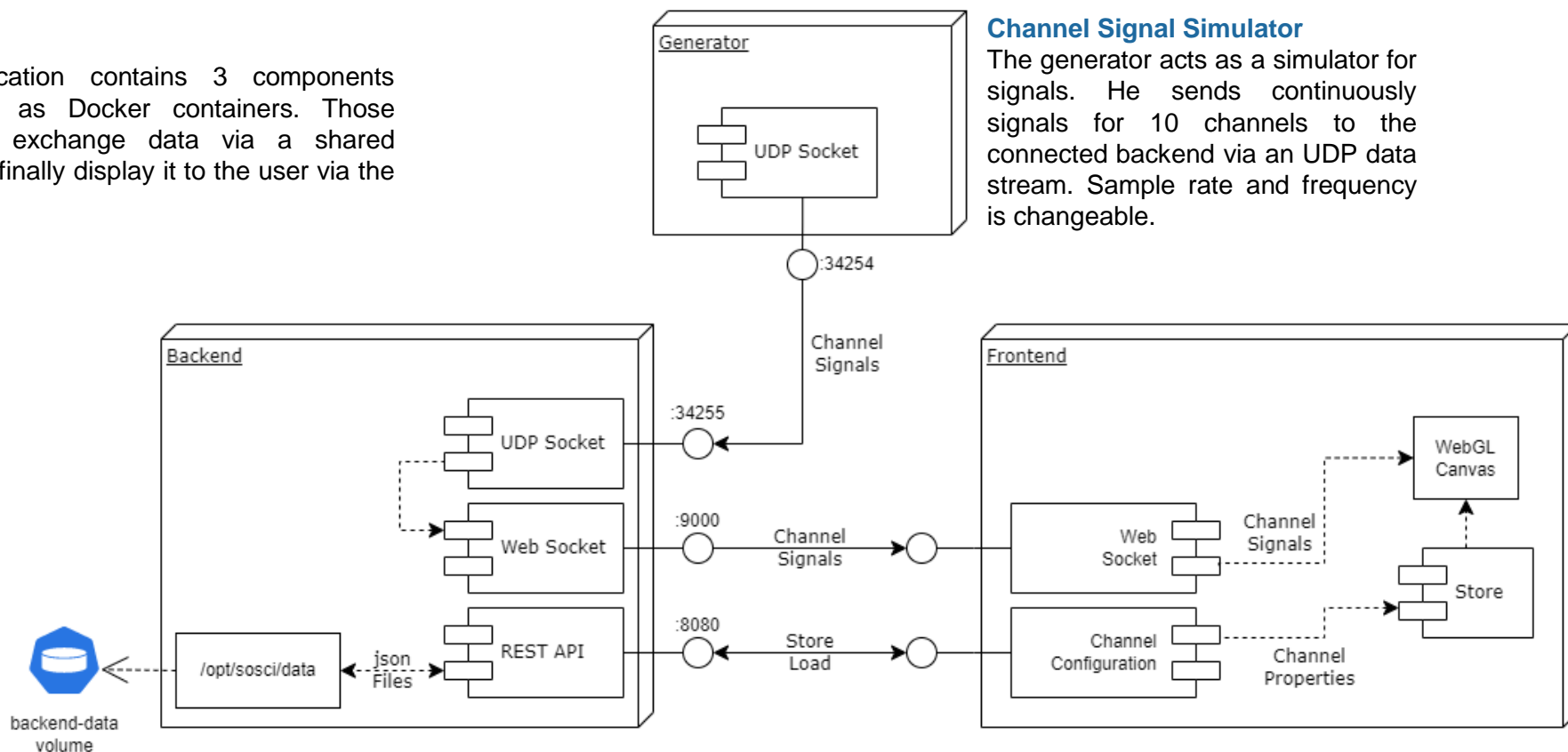


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# Software Architecture

## Overview

The application contains 3 components which run as Docker containers. Those containers exchange data via a shared network to finally display it to the user via the frontend.



## Oscilloscope Backend

The backend accepts the incoming channel data from the generator and prepares it for transmission to the frontend. It also provides a REST API for loading & storing channel configurations like enabled channels, offset and amplitude settings.

## Channel Signal Simulator

The generator acts as a simulator for signals. He sends continuously signals for 10 channels to the connected backend via an UDP data stream. Sample rate and frequency is changeable.

## Oscilloscope User Interface

The frontend provides a graphical user interface including the plotted channels and detailed information about min & max values. Via the control panel it's also possible to adapt the sweep speed, amplitude and offset for each individual channel. The settings page provides access to pre-configured channel properties and gives also the ability to create new presets.