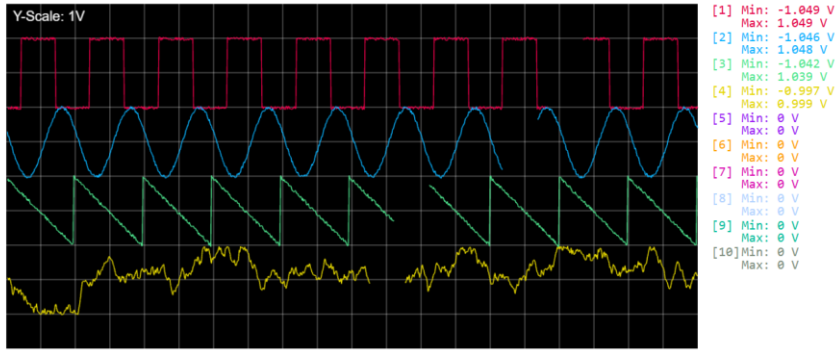
SOSCI

Software Oscilloscope



The goal of SOSCI is to empower oscilloscope users to unlock the full potential of their hardware and beyond. Our vision is to revolutionize the work of engineers with a cutting-edge, web-based application that streamlines their daily tasks.

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.

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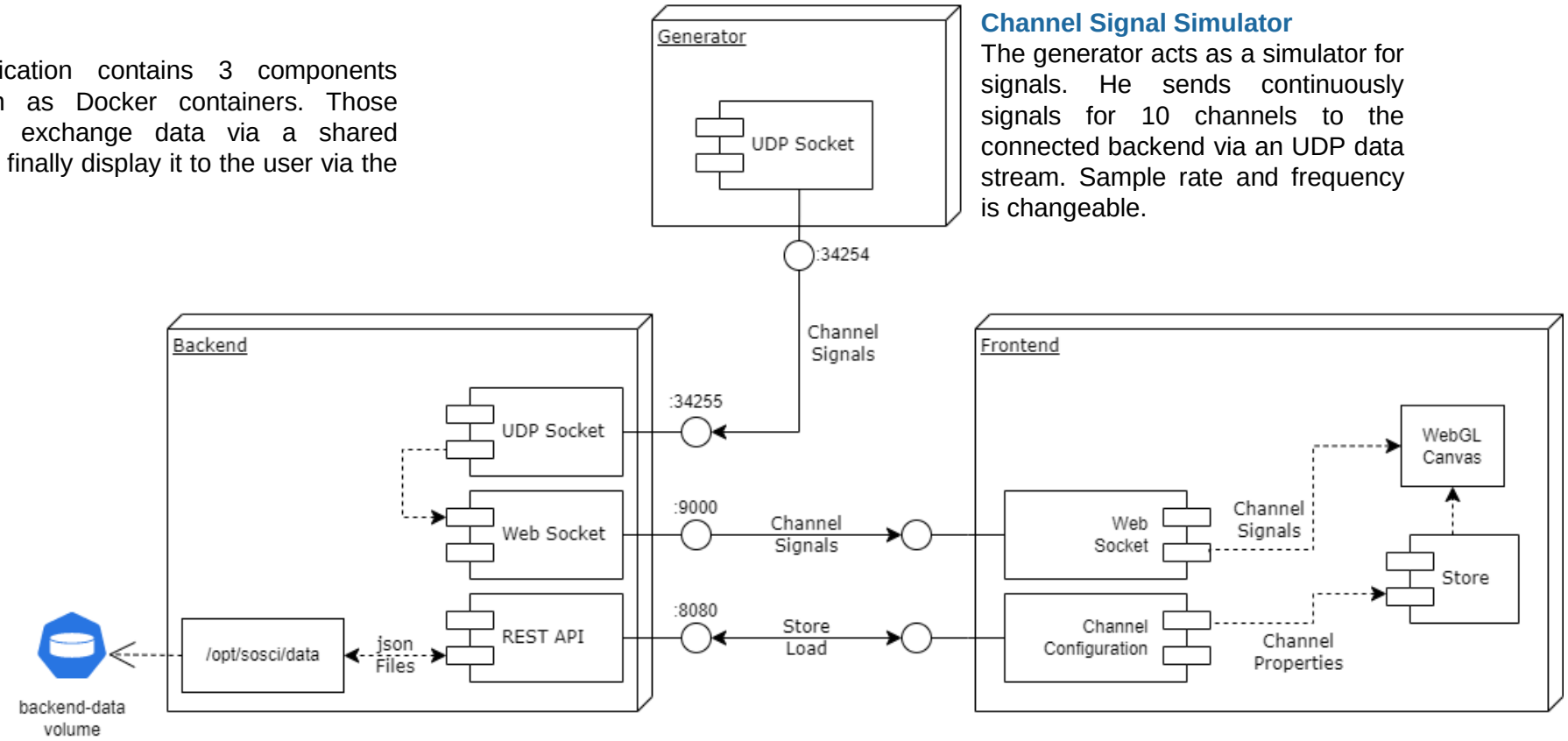
Software Architecture

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.



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 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.

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.