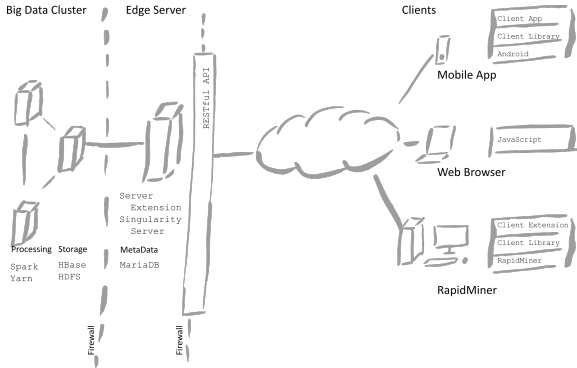


OPA-TAD Documentation

Overview

Welcome to the technical documentation of OPA_TAD. This page gives technical details for everybody, who is interested in participating in this project. Here we will layout the interfaces and details of how the parts of the project work together. For each component, the inner workings will be explained and documentation for APIs given.

Here is an overview of the components and the connections between them:



How do the Components work together?

When a client wants to connect to the OPA_TAD platform, it needs to access the RESTful Webservice API. This can be done either directly using the api itself or using the provided Client Library, which is a java library. This can be used in any Java based program as for example in android mobile apps. The library is also used for integrating the platform neatly into RapidMiner, a world leading data analysis and machine learning platform. All clients will connect over the internet to the api. This api is provided by the edge server which runs Singularity Server. This is a server, where RapidMiner data processing processes can be exposed as restful webservice. The processes use functionality of the Server extension to provide the semantics of the API. This includes accessing meta data from the local MariaDB, getting data from the Storage level of the Big Data Cluster behind the Edge server or starting analysis processes using the processing level.

Components

Back-End

- Big Data Cluster
- Server Extension
- Singularity Server
- MetaData Database
- RESTful API
- Storage Level
- Processing Level

Clients

- Client Library
- Client App
- Client Extension