

**TINF21C, SWE I Praxisprojekt 2022**

Software Architecture Specification (SAS)

**Project: AAS-Management**

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**Version 0.1**

Version History

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| Version | Date | Author | Comment |
| 0.1 | 30.10.2022 | Jonas Graubner | Created |

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# Introduction

The goal of this project is to develop a web application that acts as a management system for the "Asset Administration Shell" (AAS). This specific web application shall have an identity and access management as well as a user administration with persistent data storage in MongoDB. The user administration enables a role distribution of the users in the user groups "Admin", "Advanced" and "Basic", whereby the role distribution is carried out manually via the Admin. Each role is equipped with different access rights and read permissions ("Advanced" gets full read access to all AAS and their sub models and "Basic" gets read access only to the basic sub models to all AAS), with the admin also having functions for managing AAS content and user management. This uses the specification of the concept as a REST API in openapi.

# System Overview

## System Environment

The AAS-Management shall be implemented as a full stack solution with a web application as the user frontend. The Browser hereby acts as the code execution platform for the user frontend by running JavaScript. The Data is served by the Hypertext Transfer Protocol Secure (HTTPS) to the frontend. The backend consists of a MongoDB Database and an Rest-API which communicate with the frontend. The Frontend fetches all Data via the REST-API.

## Software Environment

The Frontend is Build using the React framework, a JavaScript library for building user interfaces (UI). For broad compatibility the proprietary code is compiled into HTML, CSS and JavaScript Code after the development process. A node,js Server is used during local development.

The Rest-API is developed in PHP with the MongoDB Driver Extension to enable connectivity between the Websever and der MongoDB Database. The webserver herby creates an HTML5 Rest-API to serve all necessary Data to the Frontend.

# Architecture

Release / Approval

Approval is made by the customer and the suppliers

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| Date: |  |
| Signature Customer: |  |
| Signature Suppliers: |  |

# References

1. Blablabla