GUIDO DIRR

SENIOR SOFTWARE ENGINEER

BASEL - SWITZERLAND

KEY AREAS OF EXPERTISE

INTERFACE PROGRAMMER
Integration of ServiceNow, Remedy, and SAP via REST/SOAP APIs, **SQL**, and Kafka Data Streaming. Development of interfaces to **automate** and ensure data transmission through monitoring and alerting systems.

C# DEVELOPMENT
Development of complex **multi-layer** applications in **C#** with a focus on **.NET Core** web and **API** development. Implementation of modern DevOps principles such as CI/CD pipelines and workflow automation.

MS SQL SERVER SPECIALIST
Optimization of MS SQL Server environments through query tuning, index optimization, and data process automation. Development of **high-performance** database **solutions** for analysis and reporting.

FULL STACK WEB DEVELOPMENT
Development of scalable web applications using **ASP.NET** and **Angular**. Focus on performance, user-friendliness, and modern architectures like MVC and Microservices.

AI ENTHUSIAST
Certified Microsoft Azure **AI Solution Designer**. Development of innovative AI-based solutions using **Python** and C#. **Prompt Engineering** professional.

PROJECTS OVERVIEW

Guido Dirr - Architecture and Implementation

SCHEDULER
WindowsService.NET / ASP.NET / WinForms

TRA – TRANSFER APPLICATION
WinService C# / ANGULAR

ASSET & INVENTORY SOLUTION
ASP.NET / ANGULAR / C# Agents / .NET API / SQL

KAFKA CONSUMER AND PRODUCER
Python / .NET API / SQL

SELENIUM ROBOTS
WinForms C# / Python / Selenium

SHAREAPP
WinForms / .NET API / SignalR

APIMAN
C# Agent / SQL / JSON / XML

DATABASE VARIANCE TOOL
SQL / ETL / ASP.NET

SCHEDULER_INSTALL
C# Agent / SQL

SCHEDULER

WindowsService.NET / ASP.NET / WinForms

Asynchronous Task/Command execution of various types like Windows Commands, PowerShell, SQL StoredProcedures, Specialized Data-Load and Report-Rendering tools and more on **multi server and network** environment.

Multi Server Tasks: Start command one on server X, then command two on server Y...

Dependency System: E.g. only run a report when the data-load was successful

Self Healing: E.g. when data-load was finally successful, resolve the full chain of tasks automatically.

Easy Monitoring and Responsible Assignment: Web overview where tasks can be searched, filtered, resolved, mass-resolved, edited, also flagged with a comment and assigned to teams or persons.

SCHEDULER

TRA – TRANSFER APPLICATION

WinService C# / ANGULAR

Bi-directional transfer application build with C# for automated data transfers to exchange data with customer or internal capsulated networks.
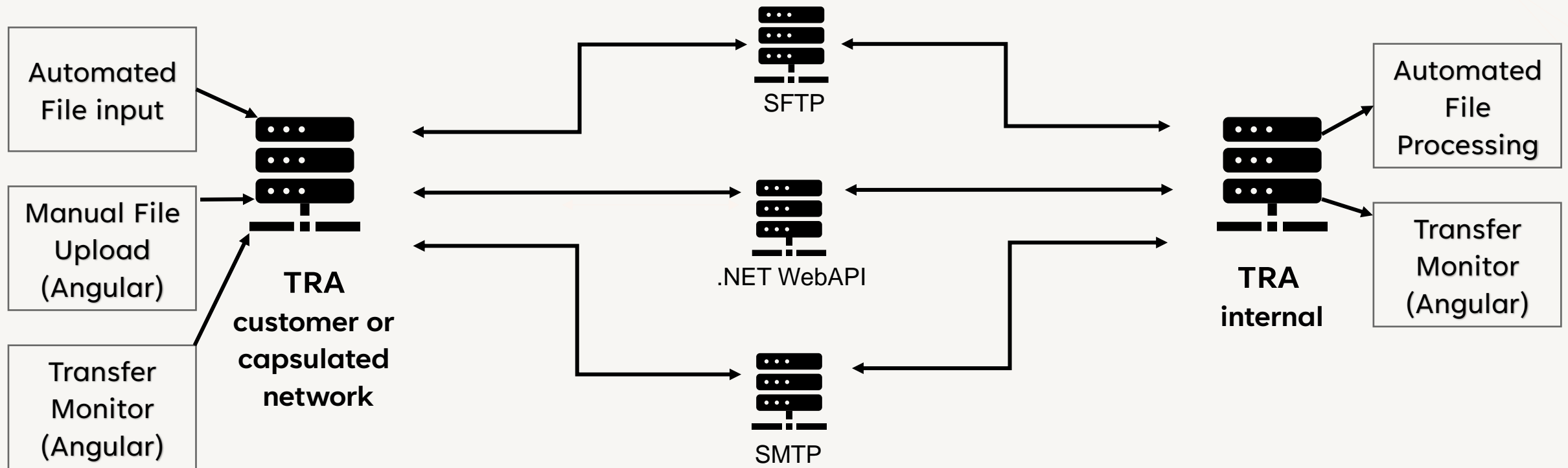
No matter what size of the given file, it is chunked into pieces, encrypted and send over to the other TRA instance which knows via meta information how many files to expect.
File is then recreated on the target instance and follow on tasks are executed when configured.

TRA can either work via SFTP, WebAPI or SMTP.

The file transfers can be monitored via an Angular UI. Manual files can be uploaded with the Angular app and handed over to the TRA service.
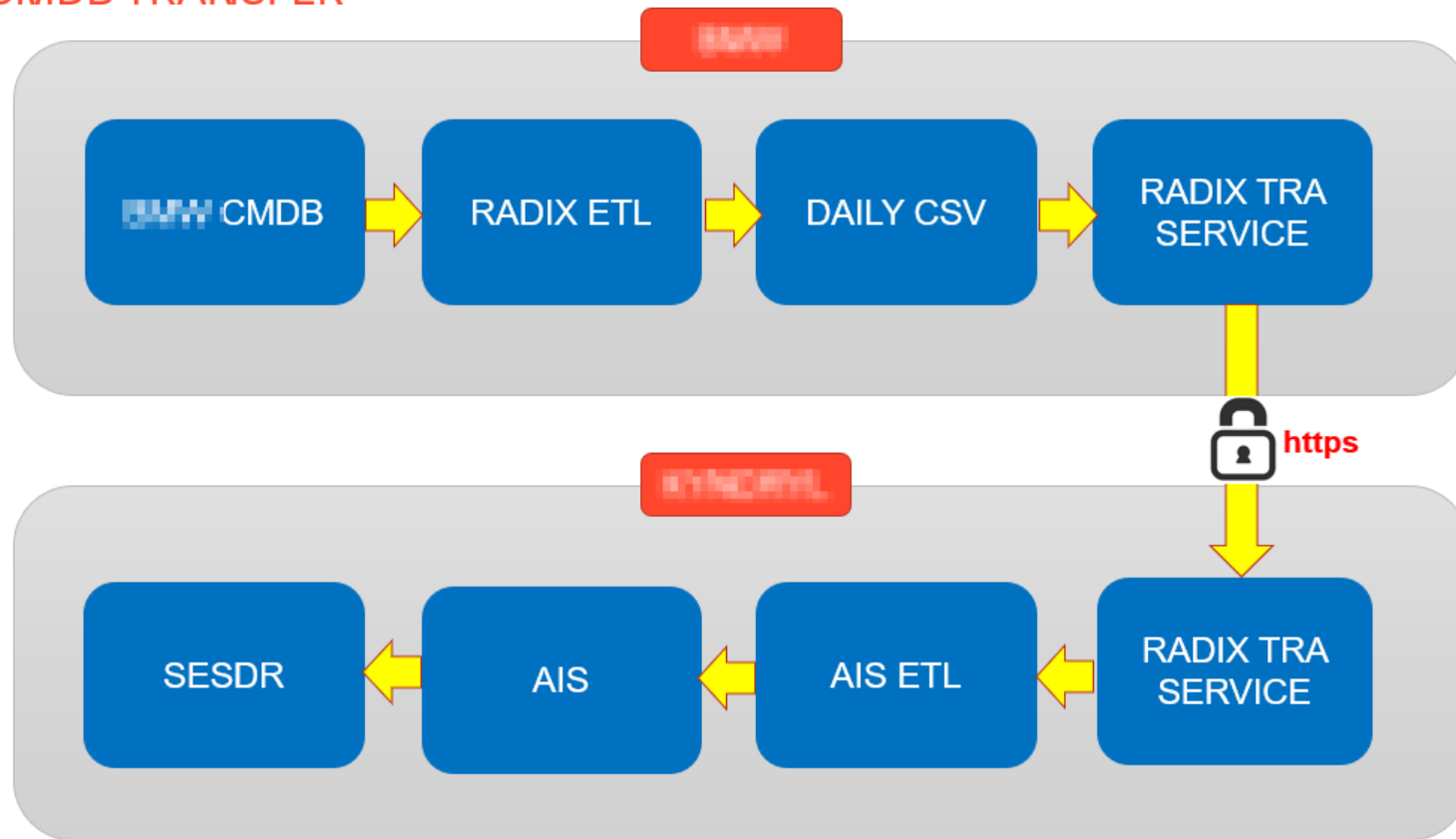
TRA – TRANSFER APPLICATION

TRA EXAMPLE
–CUSTOMER CMDB PROCESSING –

AIS
████ CMDB TRANSFER

████ CMDB → RADIX ETL → DAILY CSV → RADIX TRA SERVICE

🔒 **https**

████████ → RADIX TRA SERVICE → AIS ETL → AIS → SESDR

Radix ETL automatically fetches the newest CMDB data daily, creates a CSV file, hands it over to the TRA service, it is picked up and handed over to the internal TRA instance over the internet, when the transfer is done, a task is automatically triggered to process the file and import it into AIS where it is enriched from other systems and rules and from there automatically transferred to SESDR system.

AIS – ASSET & INVENTORY SOLUTION

ASP.NET / ANGULAR / C# Agents / .NET API / SQL

CMDB Solution managing +300 customers, strong integration features for inflow and outflow.

Dynamic ASP.NET DevExpress UI with Angular components.

Data Validation Engine based on dynamic Rule System for auto correction or manual intervention via team assignments.

.NET Web API for integration with producing or consuming systems like Ansible.

Fully dynamic XLS/X to SQL Web Mass loader with ASP.NET and post load procedure triggering.

Scheduled C# Console Agents for data integration and validation.
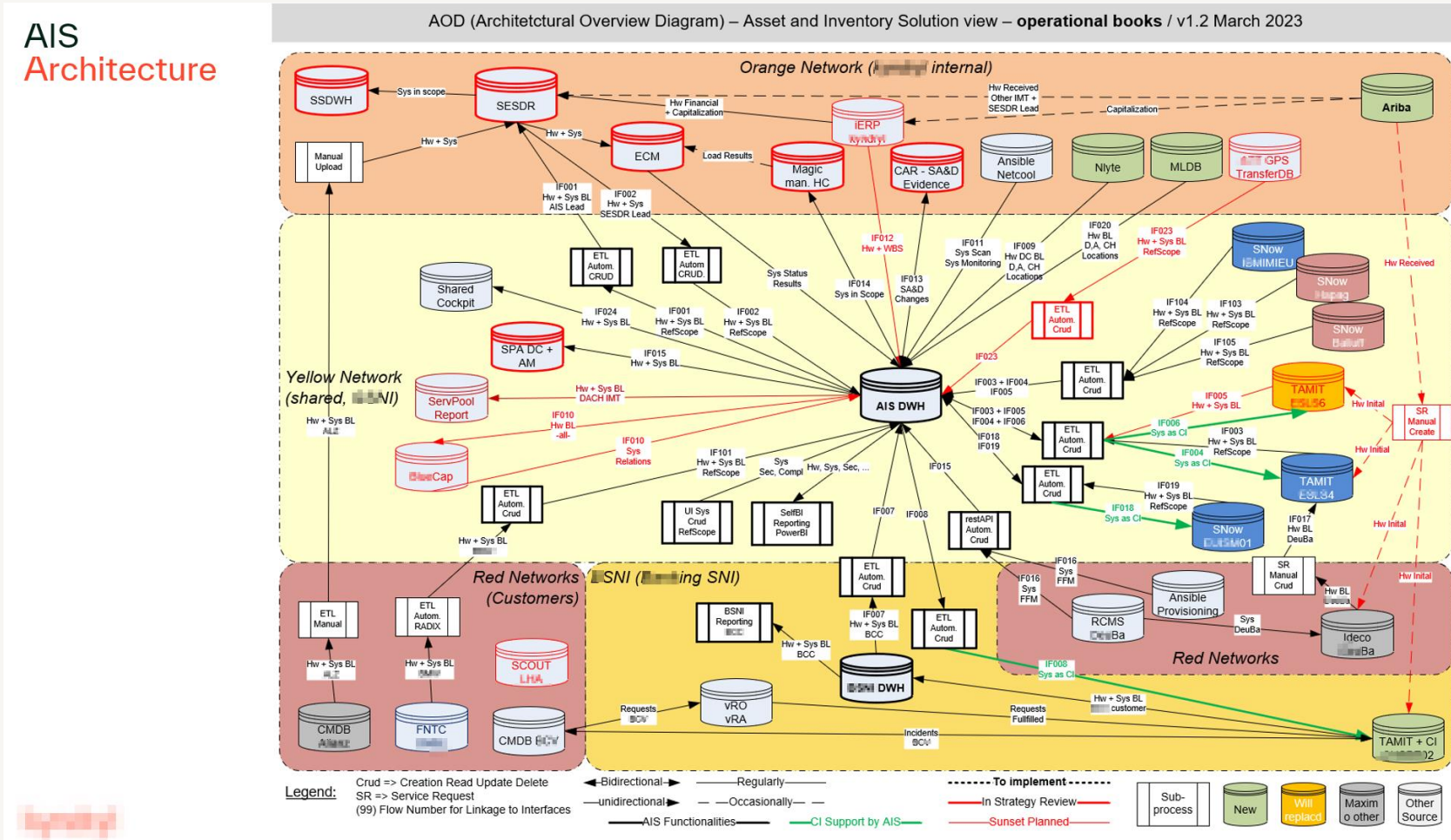
AIS – ASSET & INVENTORY SOLUTION

ASP.NET DevExpress

Angular

AIS – ASSET & INVENTORY SOLUTION

Massive Data Integration Layer for integration with Systems like ServiceNow and IBM Control Desk.

KAFKA CONSUMER AND PRODUCER

Python / .NET API / SQL

Two Python Applications for integrating with a system called AIOps which is connected by two KAFKA streams for input and output.

Python applications (consumer and producer) are CE certified (Community Engineering) and run as Kubernetes containers 24/7 on a foreign system with no error and continuous data consummation for +6 months.
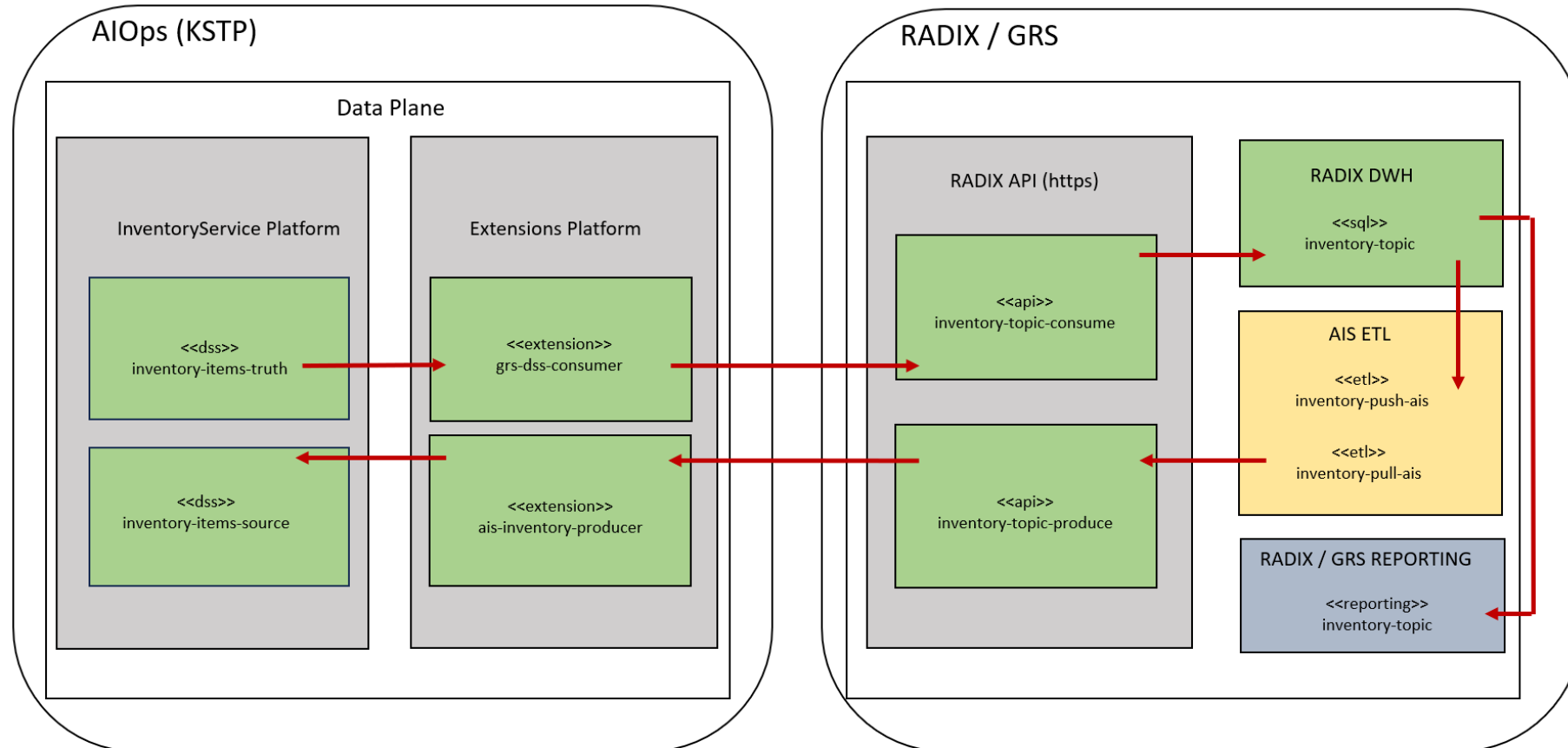
.NET Web API for integration with source application.

DevOps: GitHub managed source and deployment.
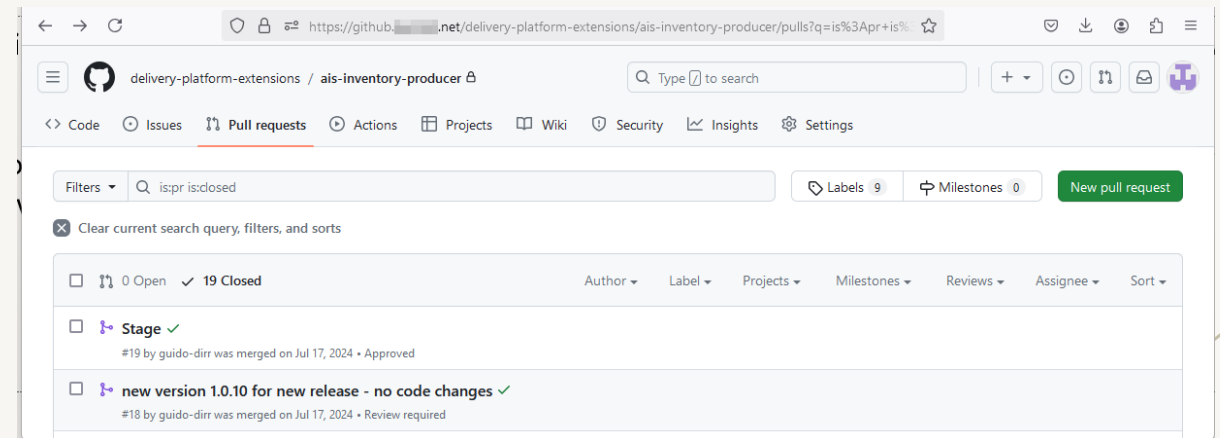
KAFKA CONSUMER AND PRODUCER

RADIX/GRS API / AIS <-> InventoryService – AIOps Extension

AIOps (KSTP)

Data Plane

InventoryService Platform

Extensions Platform

<<dss>>
inventory-items-truth

<<extension>>
grs-dss-consumer

<<dss>>
inventory-items-source

<<extension>>
ais-inventory-producer

RADIX / GRS

RADIX API (https)

<<api>>
inventory-topic-consume

<<api>>
inventory-topic-produce

RADIX DWH

<<sql>>
inventory-topic

AIS ETL

<<etl>>
inventory-push-ais

<<etl>>
inventory-pull-ais

RADIX / GRS REPORTING

<<reporting>>
inventory-topic

KAFKA CONSUMER AND PRODUCER

A comment from the main architect of the integrated system AI Ops.

SELENIUM ROBOTS

WinForms C# / Python / Selenium

Expertise in building professional Selenium Robots for automating
application integrations test, application and SharePoint manipulation, warming or data feeds via
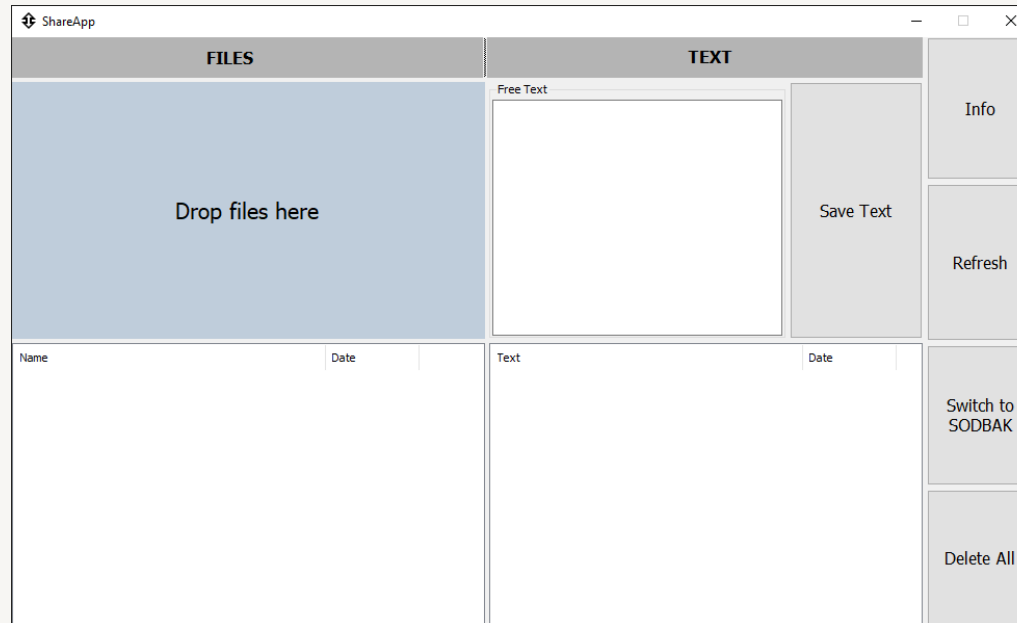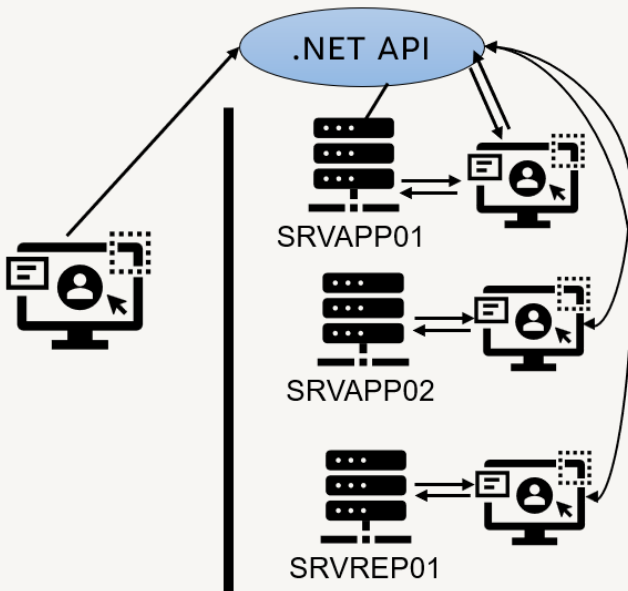complex web forms.

SHARE APP
WinForms / .NET API / SignalR

As File copy option via RDP was removed by policy, our team of ~20 developers needed a solution to copy files from and to our different servers.
The solution consists of a WinForms.NET client which uses a .NET API for file transfer, connected via SignalR for live updates.

APIMAN

C# Agent / SQL / JSON / XML

A C# .NET Agent which interacts with various foreign systems like ServiceNow to upload data using their corresponding API via JSON or XML.

Scheduled SQL ETL Jobs prepare the entities which differ for insert/update/delete in the target system.

APIMAN processes the prepared entities and uploads the data, keeps track of the upload state, error-handling and monitors the interface. In case of issues the teams are informed either via mail or ticket.
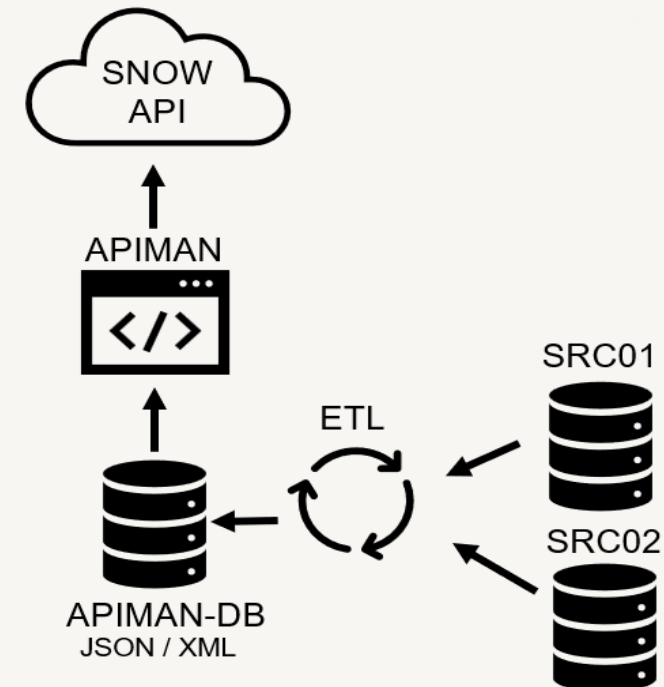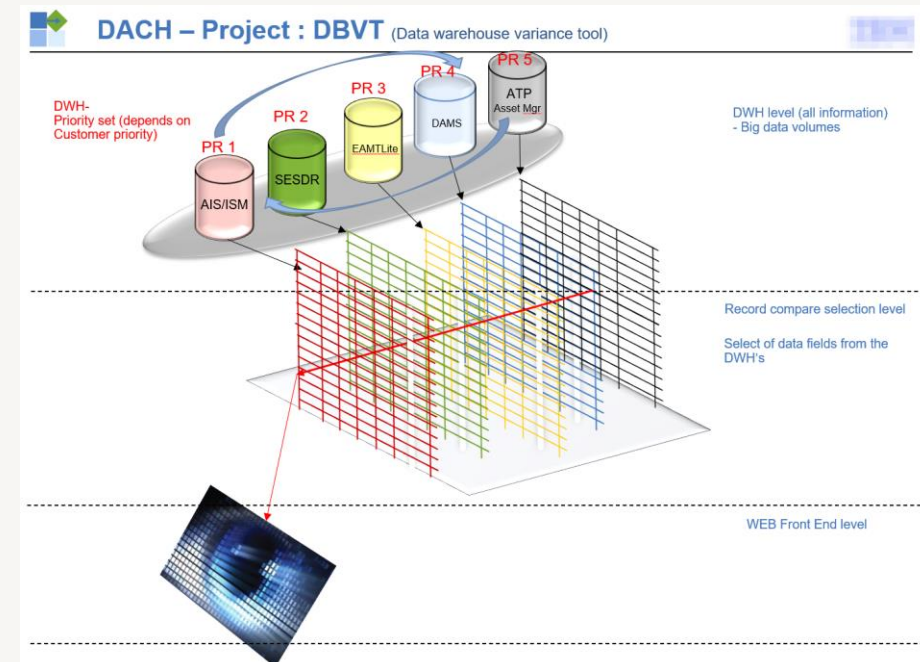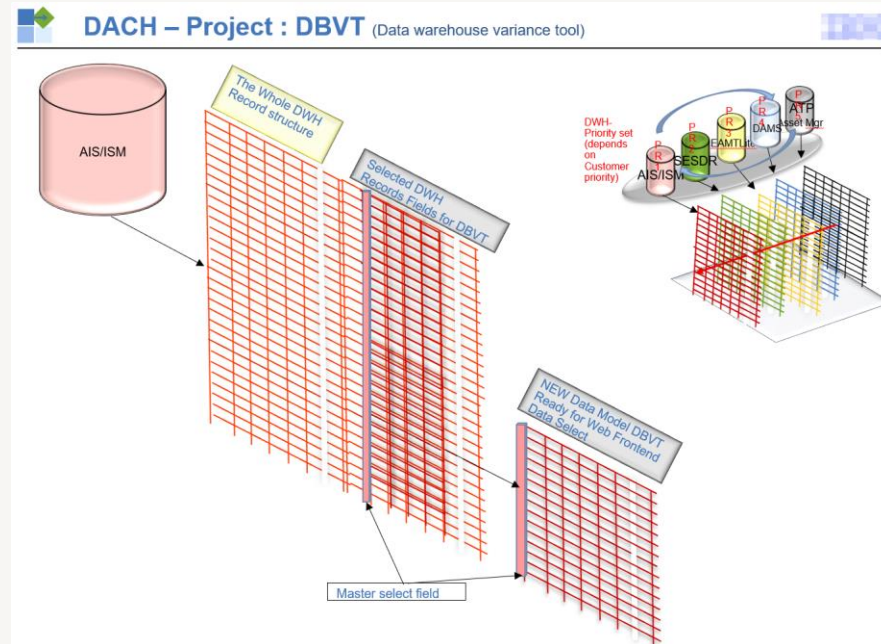
DATABASE VARIANCE TOOL

SQL / ETL / ASP.NET

Compare 5 different asset management data sources which all host the same data, map and compare the fields, find discrepancies, trigger correction.
ASP.NET UI contains a wizard to select the master and slave system for the analysis and has great filtering power.

SCHEDULER_INSTALL

C# Agent / SQL

C# Agent, installed on every server polls a central database for jobs to execute.
It can enable/disable/start/stop services, deploy files via sql binary stream, execute sql and windows commands, all in a chain.

Used to automatically change and set service user passwords,
automatically shout down the environment
on Sundays for server patches purposes.
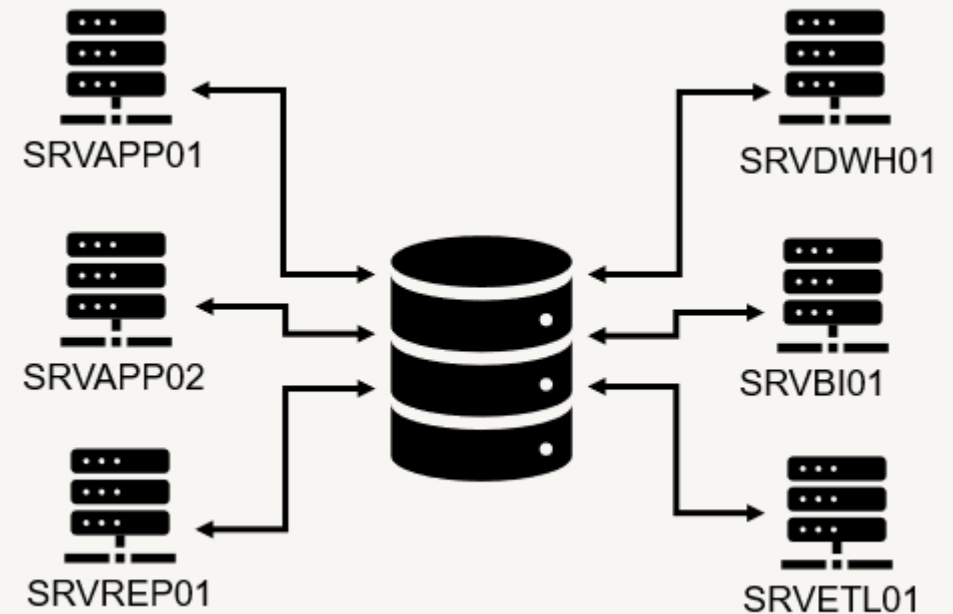
AI ENTHUSIAST

AI ENGINEERING / PROMPT ENGINEERING / MACHINE LEARNING FINANCIAL DATA PREDICTION PYTHON