

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

**Edit Command [R2923] - ListCustomerSwitchAccountClosing**

**Command**

Task: AIS\_Merge

Command Type: Stored Procedure

Name: ListCustomerSwitchAccountClosing

Description: Checks account closed dates of list customer switch. If closeddate is in the past the accountclosed flag goes to Y.

Sequence

Sequence Nr: 2 Reset Interval

Server: S0SM28SNI.SNI.CH.IBM.COM

Maximal Duration Sec: 60 Continue On Error

Max Auto Retries: 1 Total of 2 attempt(s)

Retry Interval Sec: 600

Sequence attributes will be saved to all commands in the same sequence.

Command Type Parameter

Database Name: AIS

Stored Procedure Name: [dbo].[P\_ListCustomerSwitchAccountClosing]

Input Parameter (optional)

Parameter Name	Parameter Type	Parameter Value

Output Parameter Names (optional)

Return Message: @ReturnMsg

Success (Return Msg):

Error (Return Msg):

Affected Records: @RecordsAffected

Buttons: Delete, Run Test, Cancel, New, Copy, Move, Save, Save and Close

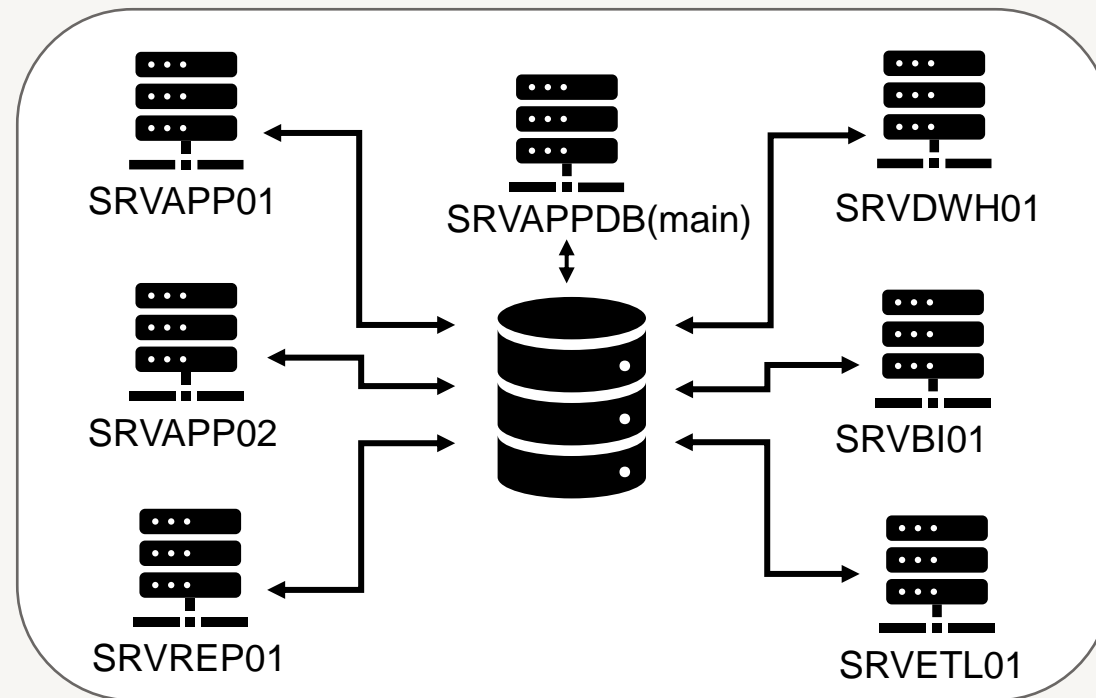
**Schedule History**

Project: [ALL] From: 09.01.2025 07:00 To: 09.01.2025 18:00

Grid and filter settings: [Reset]

Action	Project	Task Name	Schedule	End Time	Status	Result	Reload	Auto reload (20 sec)
?	Dataloads	ERT_Features_Unload_BRM_Person_Data_SAP_COSTCENTER	09-01 06:32	09-01 06:32	Completed	Success	Action menu	
?	Milliar Reporting	Job_SMY_Voerkl_Monday_0815	09-01 06:32	09-01 06:34	Completed	Success	Action menu	
?	Dataloads	IPCA_MAINFRAME_MEUSI_MONTHLY_EARLY_MASTER	09-01 06:32	09-01 06:38	Completed	Success	Action menu	
?	Dataloads	IPCA_MAINFRAME_MEUSI_FULLLOAD_DAILY_MASTER	09-01 06:32	09-01 06:33	Completed	Success	Action menu	
?	Dataloads	IPCA_MAINFRAME_MEUSI_DELTA_LOAD_DAILY_MASTER	09-01 06:32	09-01 06:39	Completed	Success	Action menu	
?	Dataloads	ERT_gdy_loads	09-01 06:32	09-01 06:46	Completed	Success	Action menu	
?	Standard Reporting	ETL_XXX_ST2_Storage	09-01 06:32	09-01 06:32	Completed	Success	Action menu	
?	Shared_Layer	Check Common Storage Layer	09-01 06:32	09-01 06:32	Completed	Success	Action menu	
?	Dataloads	DE20_PROD_DELTA_LOAD_DAILY_MASTER	09-01 06:31	09-01 06:36	Completed	Success	Action menu	
?	ISN Load for SRT Persons	Job_ICD_Load_for_SRT_Persons	08-01 06:31	08-01 06:32	Completed	Success	Action menu	
?	Dataloads	IPCA_MAINFRAME_MEUSI_IP2_FULLLOAD_MONTHLY_EARLY_MASTER	08-01 06:31	08-01 06:32	Completed	Success	Action menu	
?	Dataloads	IPCA_MAINFRAME_MEUSI_FULLLOAD_WEEKLY_MASTER	06-01 06:32	06-01 06:32	Completed	Success	Action menu	
?	Dataloads	WHEEL Monthly Load	03-01 06:31	03-01 06:32	Completed	Success	Action menu	
?	Dataloads	Unload_BackupAndRecovery_Recovery_Monthly	03-01 06:31	03-01 06:32	Completed	Success	Action menu	
?	Standard Reporting	ReportSend_XXX_Monthly_21st	24-12 06:31	24-12 06:32	Completed	Success	Action menu	
?	HEH Reporting	HEH_Report_Monthly_17th_1100	20-12 08:38	20-12 08:38	Completed	Success	Action menu	
?	HEH Reporting	HEH_Merces_Report_Monthly_18th_1000	20-12 08:38	20-12 08:38	Completed	Success	Action menu	
?	ATI Reporting	ReportSend_ATI_Monthly_10th	15-12 17:33	15-12 17:37	Completed	Success	Action menu	
?	DWH Tasks	scsm20_IAM_PerformanceOptimization	09-01 14:33	09-01 14:33	Completed	Success	Action menu	
?	Dataloads	EXPORT_BRMCOMP_MKT_OVERVIEW_SWITZERLAND_ALL_SER	09-01 14:32	09-01 14:32	Completed	Success	Action menu	

Page 2 of 14 (172 items) Page size: 20



# 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.

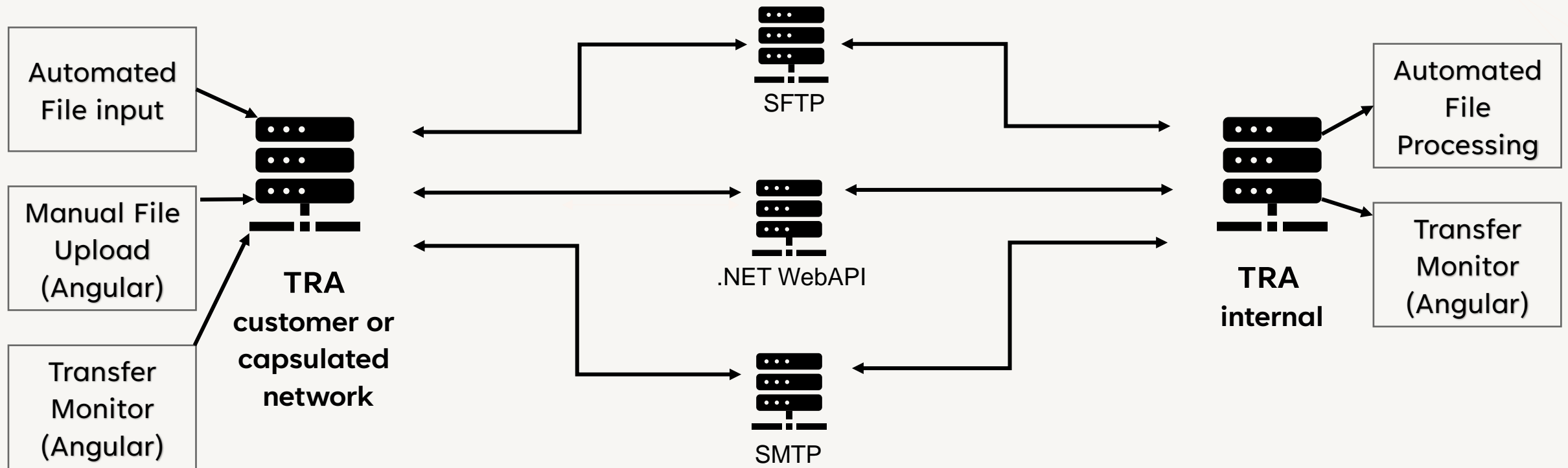
No matter what size of the given file, it is chunked into pieces, encrypted and send over to the other TRA instance which knows via meta information how many files to expect.

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



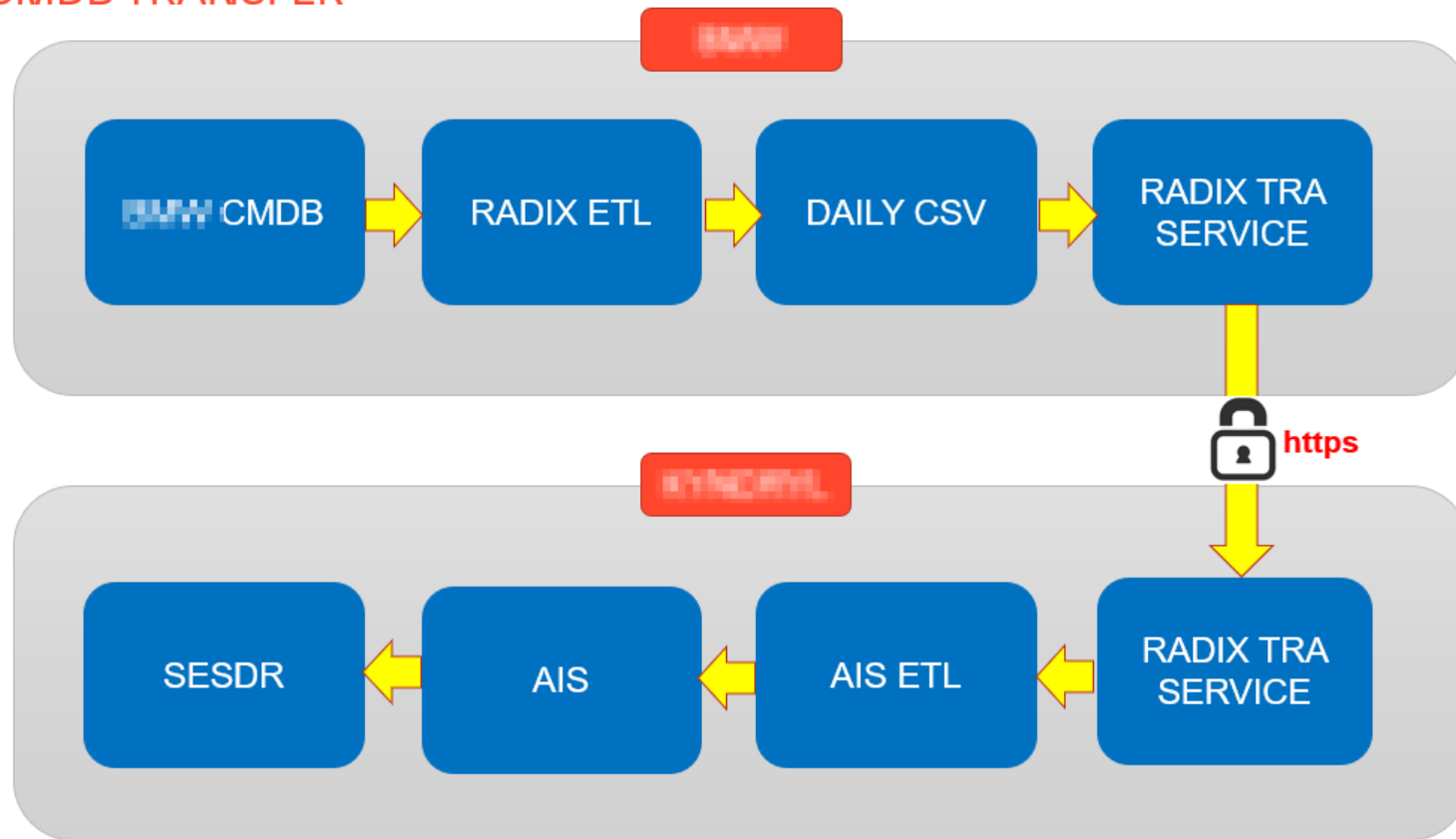


# TRA EXAMPLE

## -CUSTOMER CMDB PROCESSING -

AIS

**CMDB TRANSFER**



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

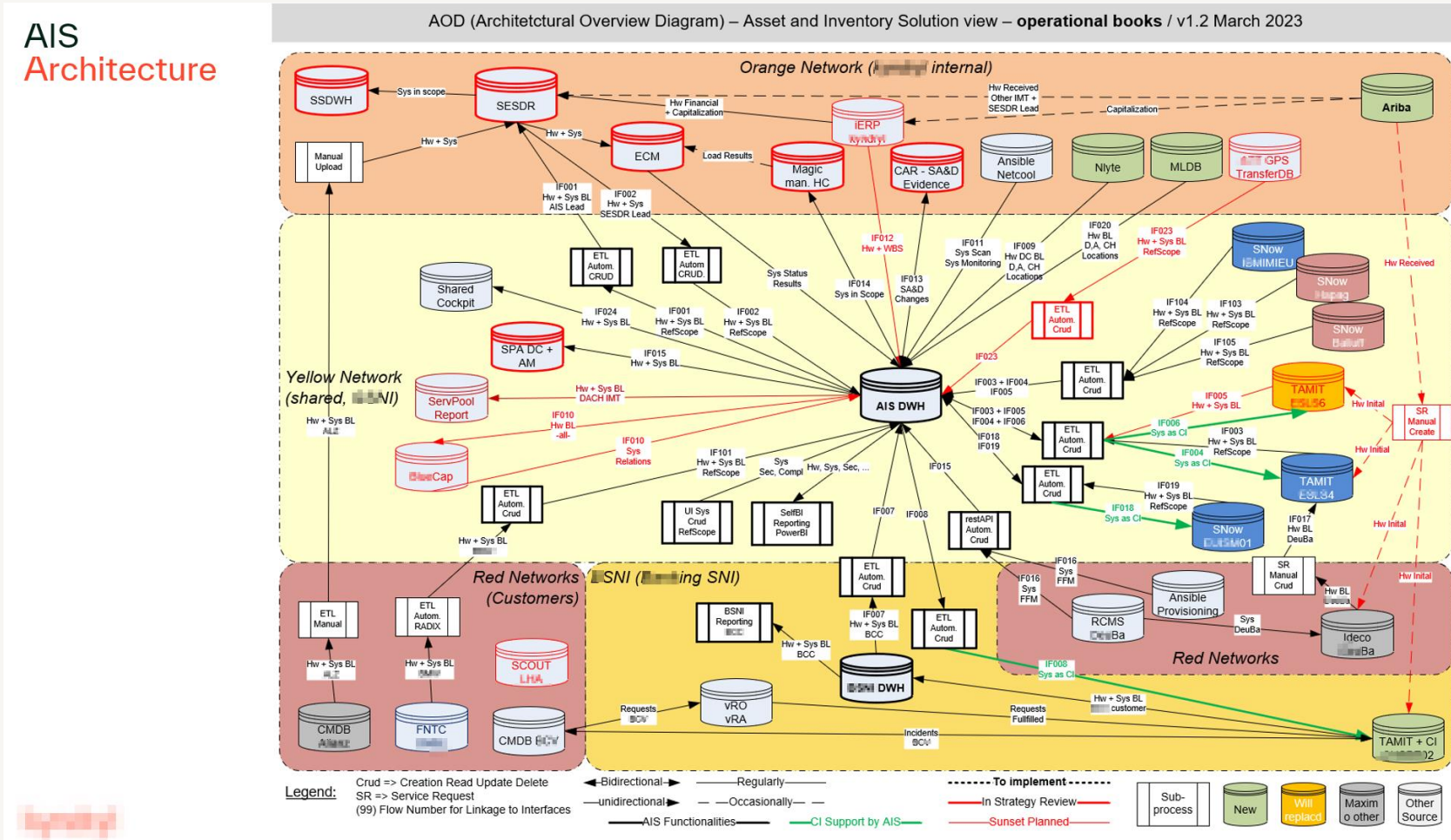
## ASP.NET DevExpress

The screenshot displays the AIS ASP.NET DevExpress web application. The top section shows a table of assets with columns for AIS ID, Ref-to-Entry, Hostname, Serial-No, Operating System, Invent. Status, Oper. Status, Record Source, HW, and Parent S. Below the table, a detailed view for AIS ID: AIS-00815218 is shown, including fields for Customer, BP\_ID, BAM ID, Customer Type, NDA Required, AIOPS Short ID, Owner ID, Company, Acc ID, ISM Customer, AIS HW Cat, MBC Category, Item ID, Manufacturers, Type, Model, Serial-No, Item Descr, Location ID, Country, City, Building, Floor, Room, Rack, Location-ID, SPA Room Key, Coord.X, Coord.Y, Postal-Address, HW, Virtual, AIOPS Scope, Status ID, AIS Status, AIOPS IS Status, Invent. Status, Oper. Status, Hostname, Inventory Purpose, HW description, SAP V4H, SAP V4H INVR, DEPCH, Request #, SOCA, Installation Date, Delivery-Date, Created, Modified, Modified by, Last Status, and Change Date.

## Angular

The screenshot displays the AIS Angular web application. The top section shows a table of assets with columns for AIS ID, Ref-to-Entry, Hostname, Serial-No, Operating System, Invent. Status, Oper. Status, Record Source, HW, and Parent S. Below the table, a detailed view for AIS ID: AIS-00815218 is shown, including fields for Customer, BP\_ID, BAM ID, Customer Type, NDA Required, AIOPS Short ID, Owner ID, Company, Acc ID, ISM Customer, AIS HW Cat, MBC Category, Item ID, Manufacturers, Type, Model, Serial-No, Item Descr, Location ID, Country, City, Building, Floor, Room, Rack, Location-ID, SPA Room Key, Coord.X, Coord.Y, Postal-Address, HW, Virtual, AIOPS Scope, Status ID, AIS Status, AIOPS IS Status, Invent. Status, Oper. Status, Hostname, Inventory Purpose, HW description, SAP V4H, SAP V4H INVR, DEPCH, Request #, SOCA, Installation Date, Delivery-Date, Created, Modified, Modified by, Last Status, and Change Date.

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



# KAFKA CONSUMER AND PRODUCER

Python / .NET API / SQL

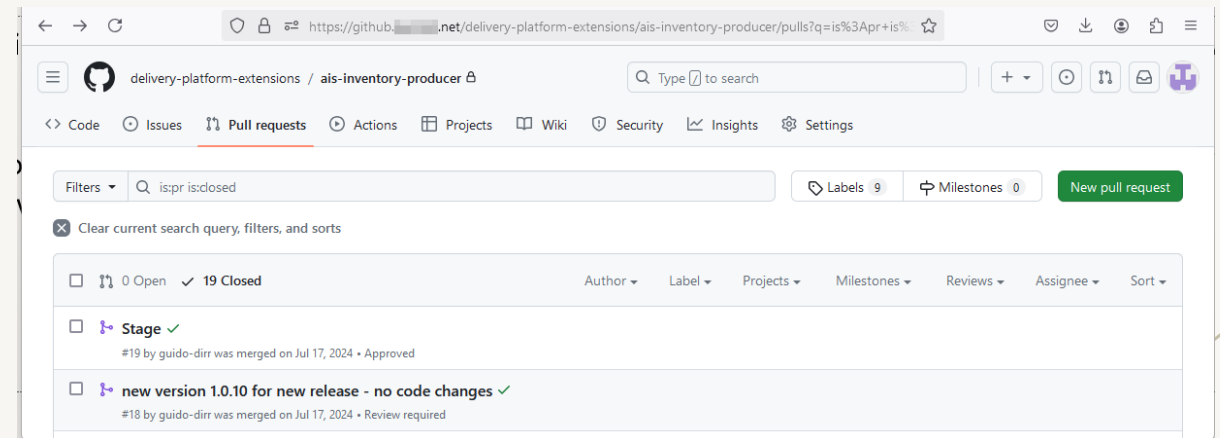


Two Python Applications for integrating with a system called AIOps which is connected by two KAFKA streams for input and output.

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.

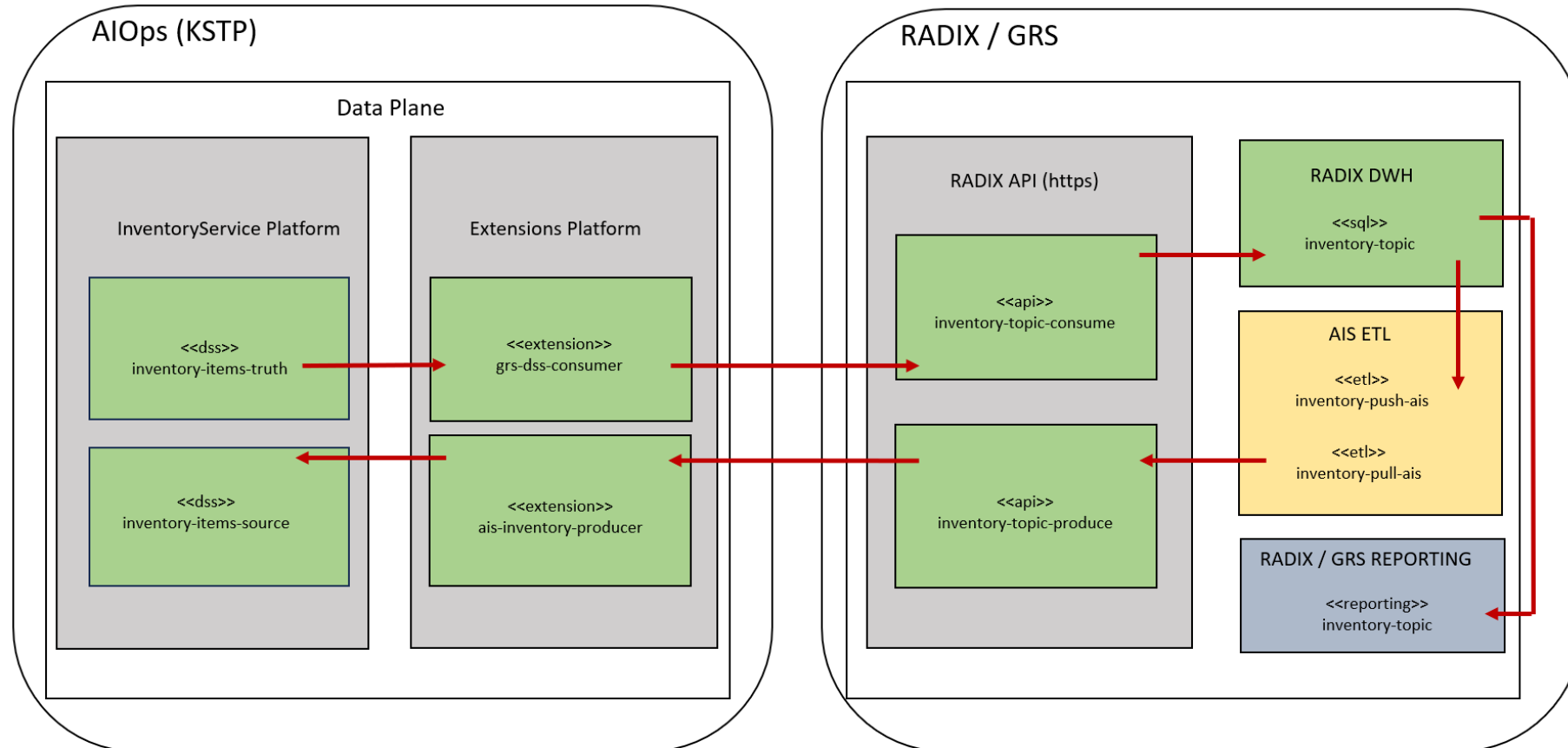
.NET Web API for integration with source application.

DevOps: GitHub managed source and deployment.




# KAFKA CONSUMER AND PRODUCER

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



# KAFKA CONSUMER AND PRODUCER

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

 **Jonathan** [redacted]

To: Guido Dirr; DI [redacted]

Cc: P [redacted]

Reply Reply all Forward

Thu 11/7/2024 4:46 PM

Start reply with: 

Very helpful. Thank you!

Very nice! Thank you!

Thanks for sharing!

 Feedback

Hi, to put some context to this,  
Guido implemented the first set of extensions for Inventory Service completed outside of the inventory team which are in production, and are an excellent example of a consumer and producer performing round-trip processing with an external cmdb, adhering to the preferred platform integration patterns

**Jonathan** [redacted] CEng MIET  
Principal Architect  
Open Group Certified Distinguished Architect  
[redacted] · [Integrated AI Ops](#)  
Phone: +[redacted]  
E-mail: [jonathan.\[redacted\]](#)



# 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.



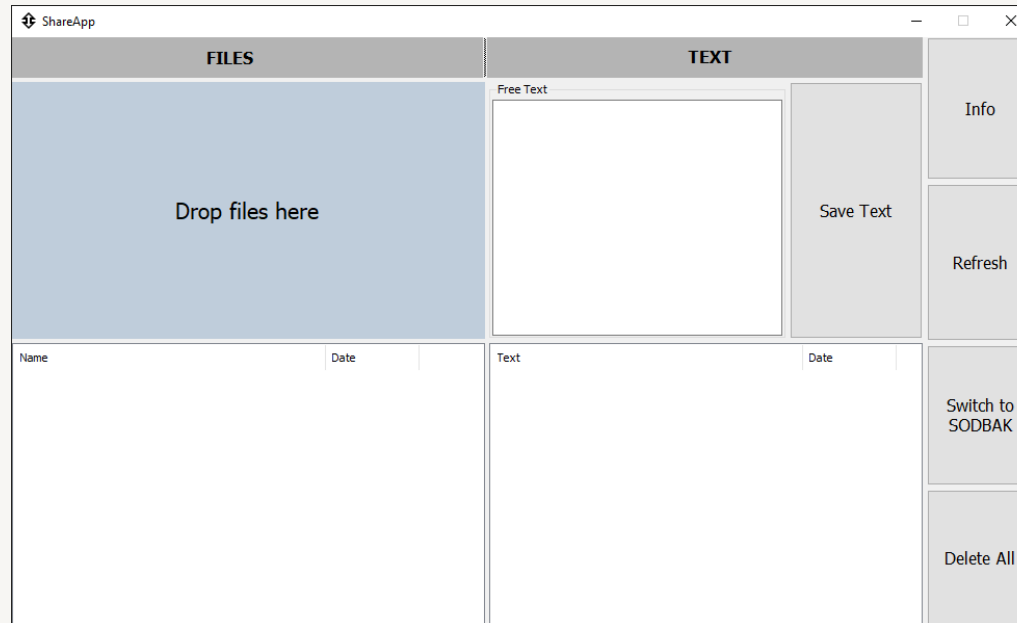
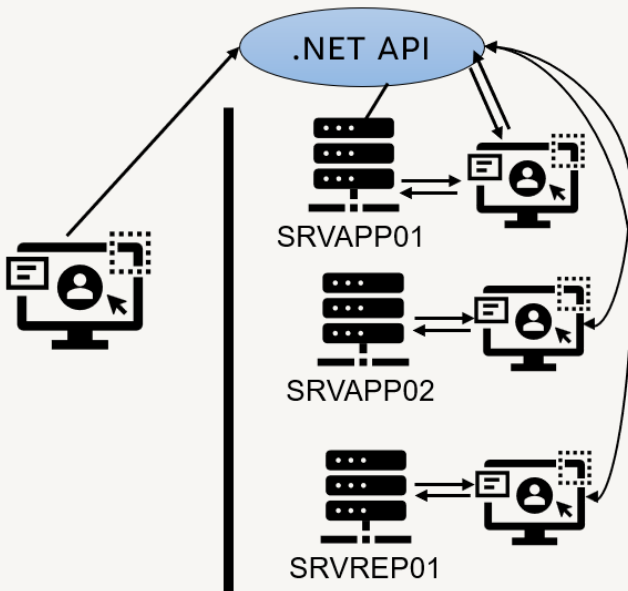


# SHARE APP

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.



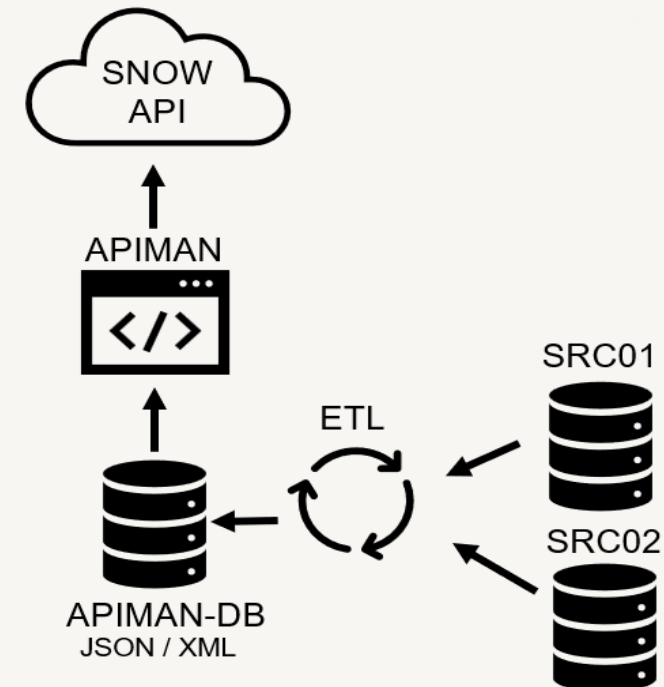
# APIMAN

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.

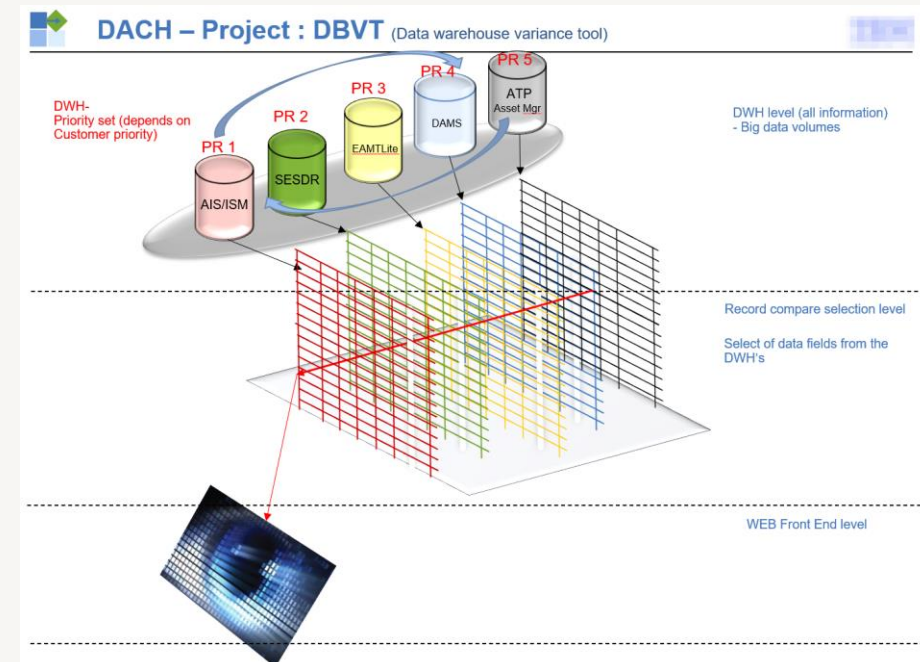
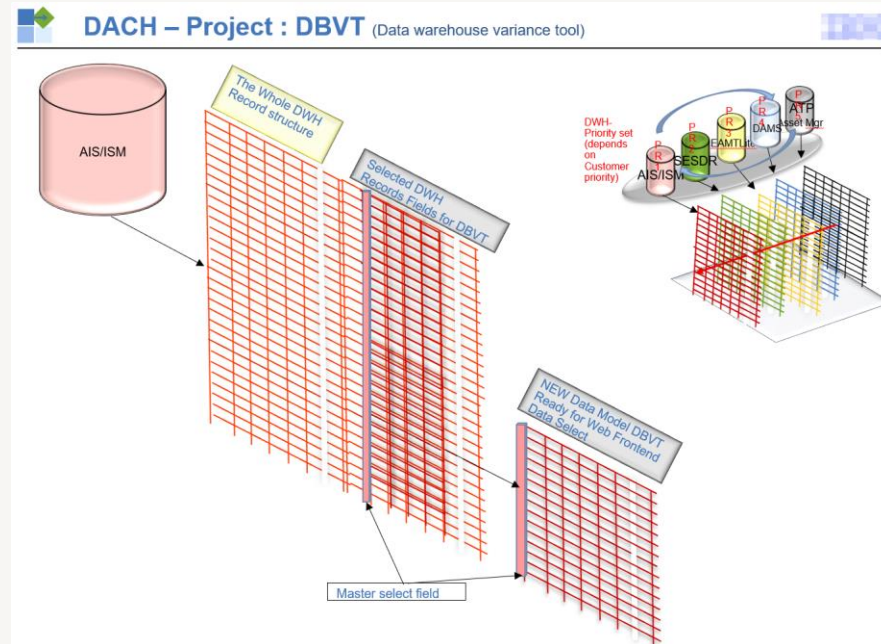


# DATABASE VARIANCE TOOL

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.

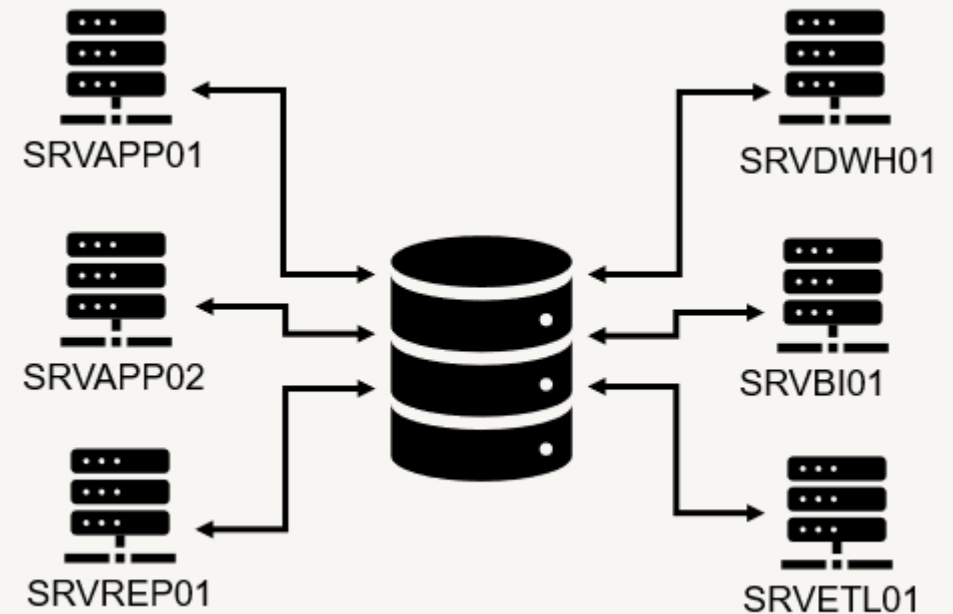


# SCHEDULER\_INSTALL

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 shut down the environment on Sundays for server patches purposes.



# AI ENTHUSIAST

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

