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**DISCO DDS System**

**System Design Document**

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Summary of Changes** |
| X0.1 | 15.07.2016 | Binh Le | First draft |
| 1.0 |  | Huy Truong | Approve first release |
| 1.1 | 18.08.2016 | Binh Le | Update overview, dpm-general, ampplus, asdp, gAlias and zubofi |
| 1.2 | 19.08.2016 | Binh Le | Add new DPM activity |
| 1.3 | 16.11.2016 | Binh Le | Update class-diagram, database design & Business Core Overview  Add Infrastructure design |

**Distribution**

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| Thuat Bui | Project Manager |
| Huy Truong | Software Manager |
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**Approval**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Position** | **Signature** | **Date** |
| Thuat Bui | CTO |  |  |

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# Introduction

## Purpose

This document provides an architectural overview of DISCO R2 system

## Scope

DISCO R2 includes DDS core business, Master Data, Logging System, DMC & Web-Report

## Definitions, Acronyms, and Abbreviations

|  |  |  |
| --- | --- | --- |
| **#** | **Synonyms/Abbreviations** | **Term** |
| 1 | SMT | **S**ystem **M**anagement **T**ool |
| 2 | ELK | **E**lastic **L**ogstash **K**ibana |
| 3 | DMC | **D**ata **M**atrix **C**ode |
| 4 | DPM | **D**aten**p**rüfungs**m**odul |
| 5 | VAE | **V**olle **A**dress**e**rfassung |
| 6 | VAM | **V**olle **A**ddress **M**anager |

## Reference documents



### Master list

|  |  |  |
| --- | --- | --- |
| **#** | **Document name** | **Description** |
| 1 | SPS\_DISCO\_R2\_Concept\_Design | Technical concept design of DISCO R2 system |
| 2 | SPS\_DSCO\_R2\_WBS\_v1.0 | Work Breakdown Structure for cost estimation |
| 3 | SPS\_ DSCO\_R2\_Diagram | Visio file contains all diagrams, workflows related to the project |

### References document

|  |  |  |
| --- | --- | --- |
| **#** | **Document name** | **Description** |
| 1 | SA\_ABA\_Abloesung\_VG.docx v0.108 | Requirements & Use Cases specification of new DISCO R2 system |
| 2 | SY\_Schnittstelle\_DPM\_DISCO\_X0101\_english.docx | English translation |
| 3 | [English\_V2]\_PDS\_ParcelInfoService\_V0224 | English translation from original version PDS\_ParcelInfoService\_V0224 – PDS web service specification |
| 4 | Mengen\_20150126.xlsx | Reference for amount of data will be processed through the DISCO R2 on each steps |
| 5 | wsdl\_jce\_jcdBCParcelData-1525627507.wsdl | Data structure of DMC Barcode to PADASA |
| 6 | VAE\_Systemanforderungen\_Vam\_V01.14.docx | Data structure of DISCO R2 to VAM |

### References external source

|  |  |  |
| --- | --- | --- |
| **#** | **Document name** | **Description** |
| 1 | <https://en.wikipedia.org/wiki/Responsibility_assignment_matrix> | Reference for RACI matrix |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
|  |  |  |

# System Design

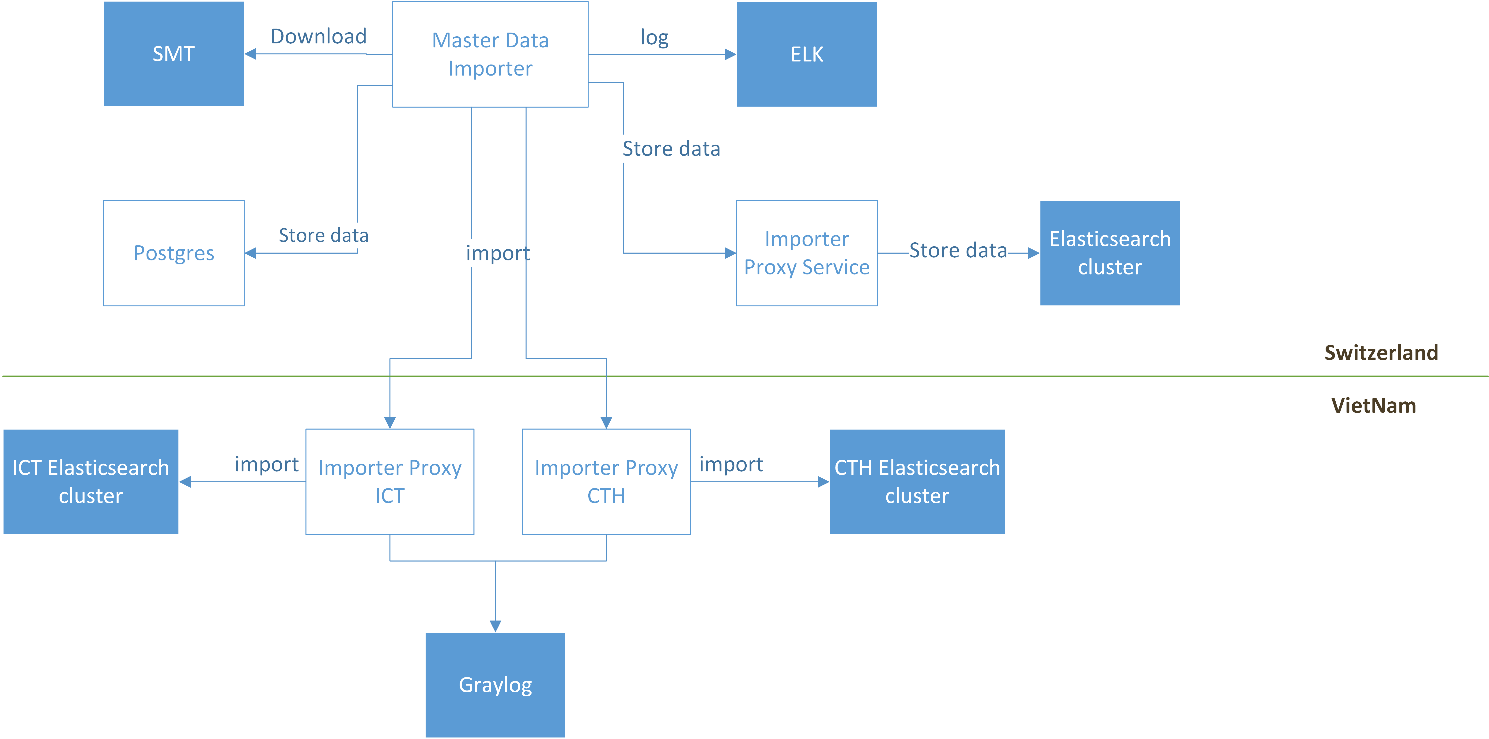
## Technical Solutions:

|  |  |  |
| --- | --- | --- |
| **#** | **Technical** | **Description** |
| 1 | Java 8 | Runtime Environment |
| 2 | Spring-Batch | Batch application framework |
| 3 | Spring-Boot | Enterprise development framework |
| 4 | Spring-Security | Authentication and authorization framework |
| 5 | Spring-MVC | Web development framework |
| 6 | Spring-Cloud-Config | Support externalized configuration in distributed system |
| 7 | AngularJS | JavaScript-based open-source client |
| 8 | Highchart | Interactive JavaScript charts for your web pages |
| 9 | Infinispan | Caching solution |
| 10 | stAX | API for XML processing is designed for parsing XML |
| 11 | ELK | Logging System |
| 12 | ClearImage | DMC engine |

## Master data importer

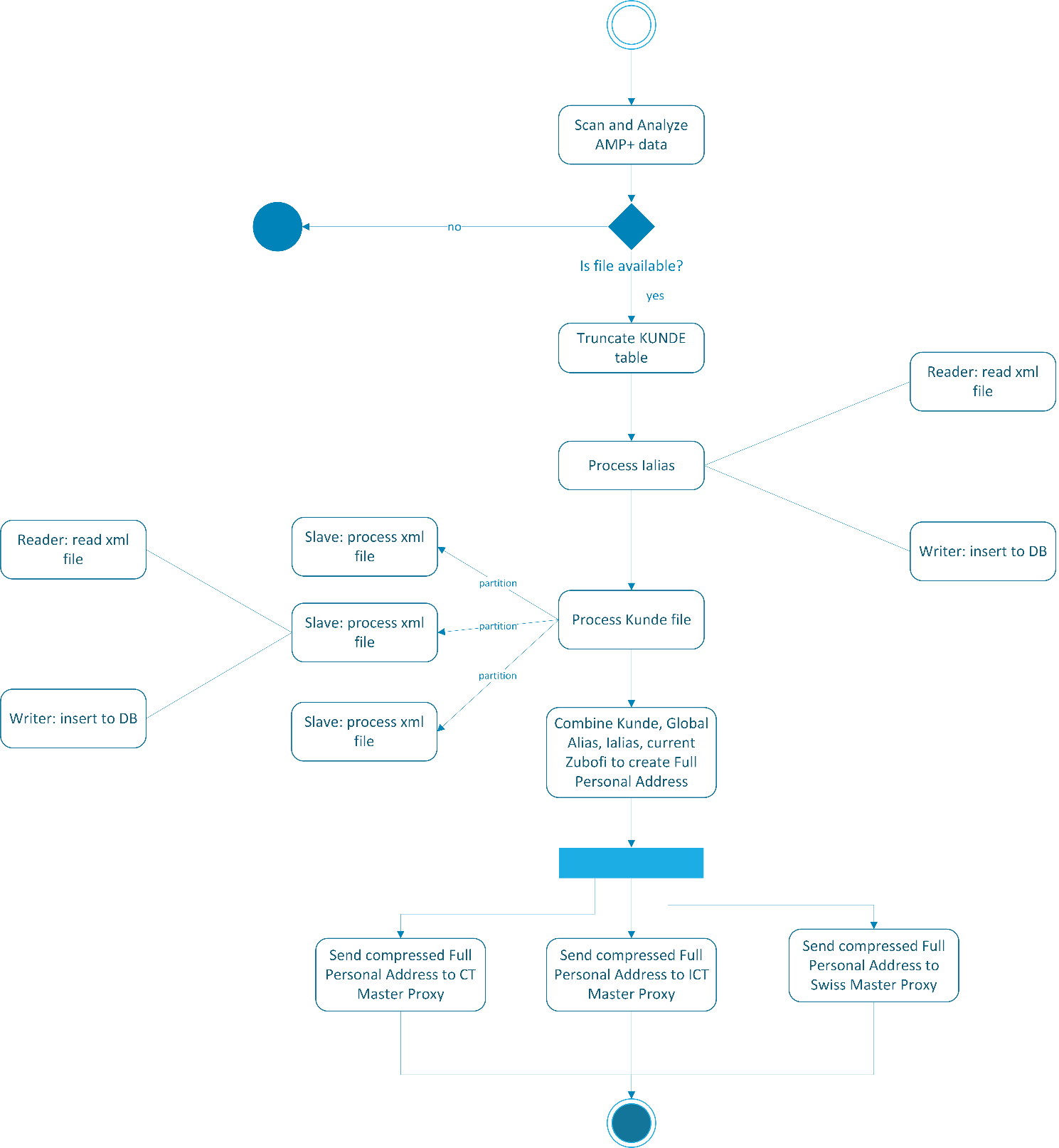
### Overview

Here is an overview of Master Data Importer system.

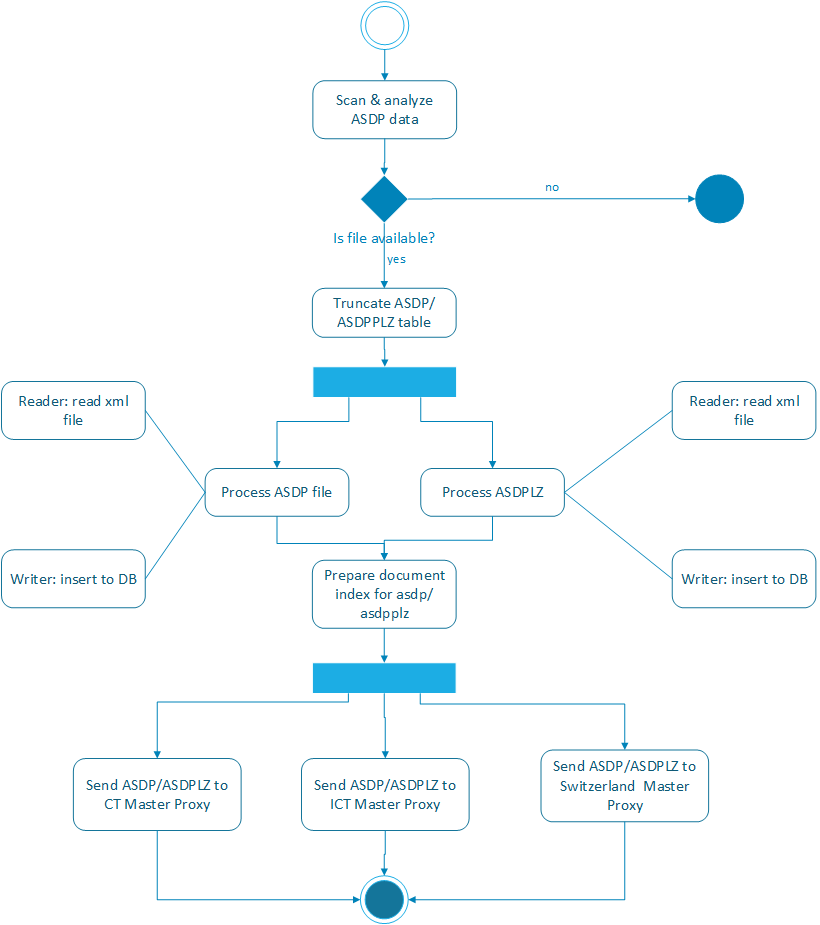


### Activity

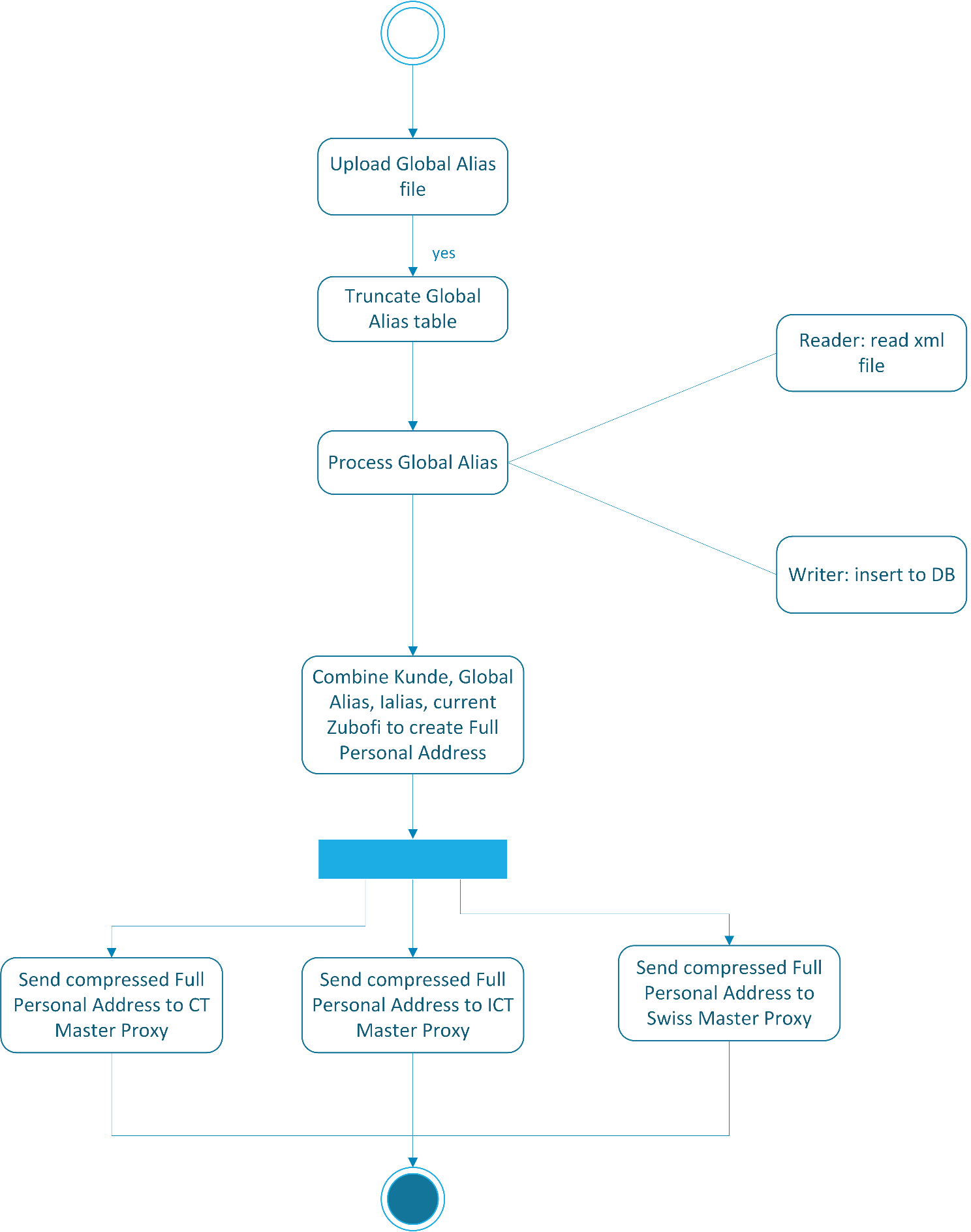
#### AMPplus



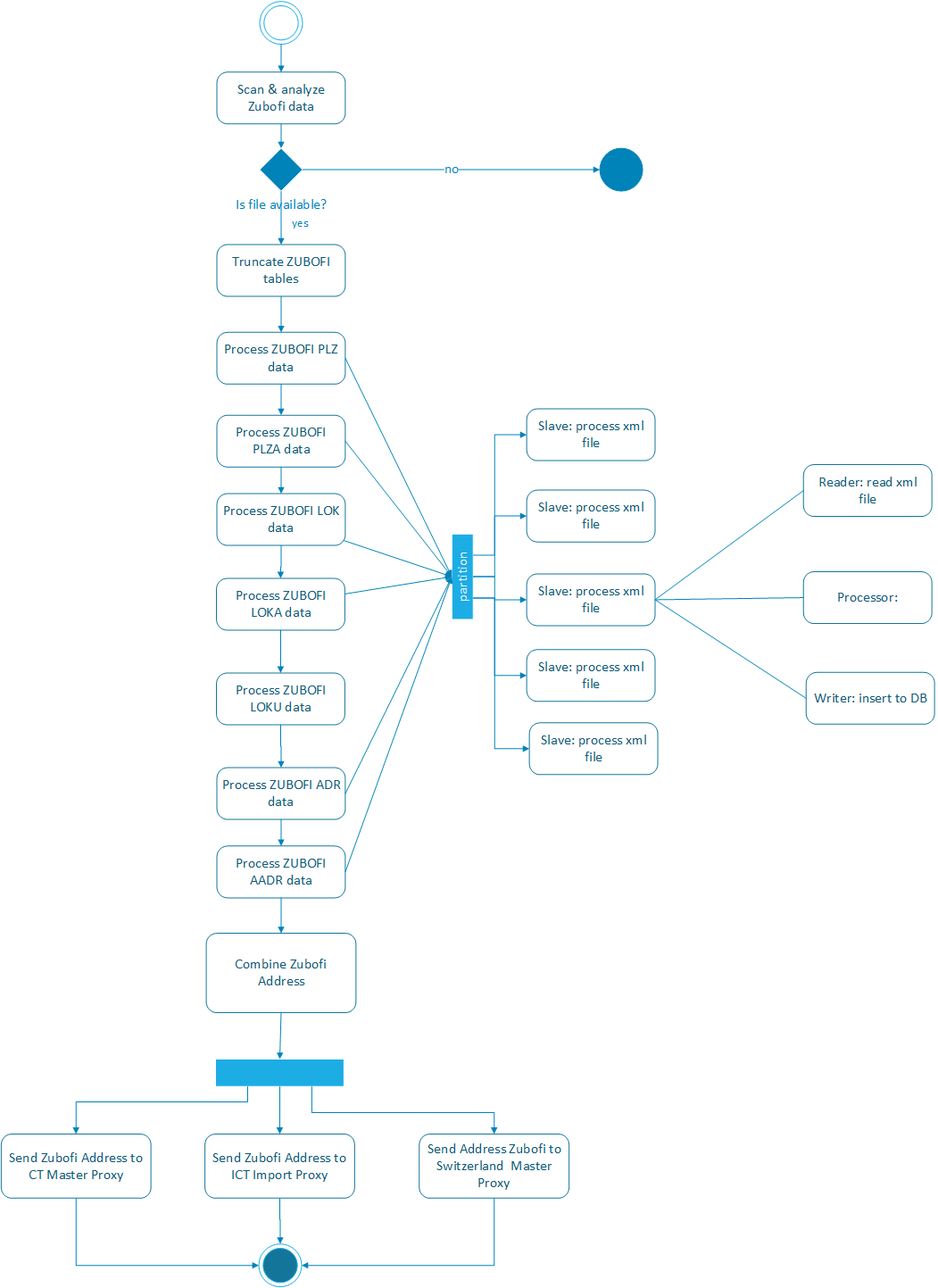
#### ASDP



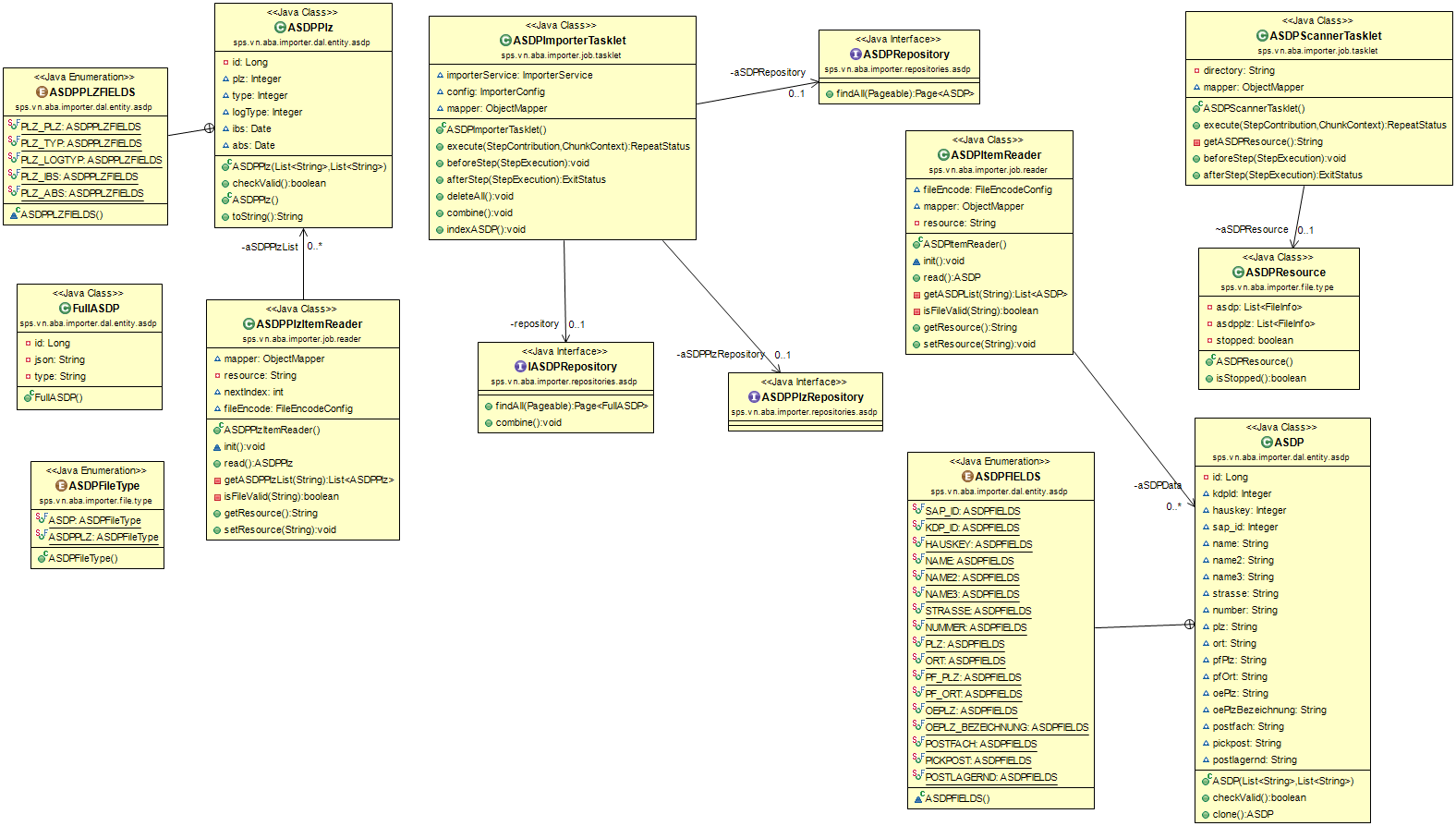
#### gAlias

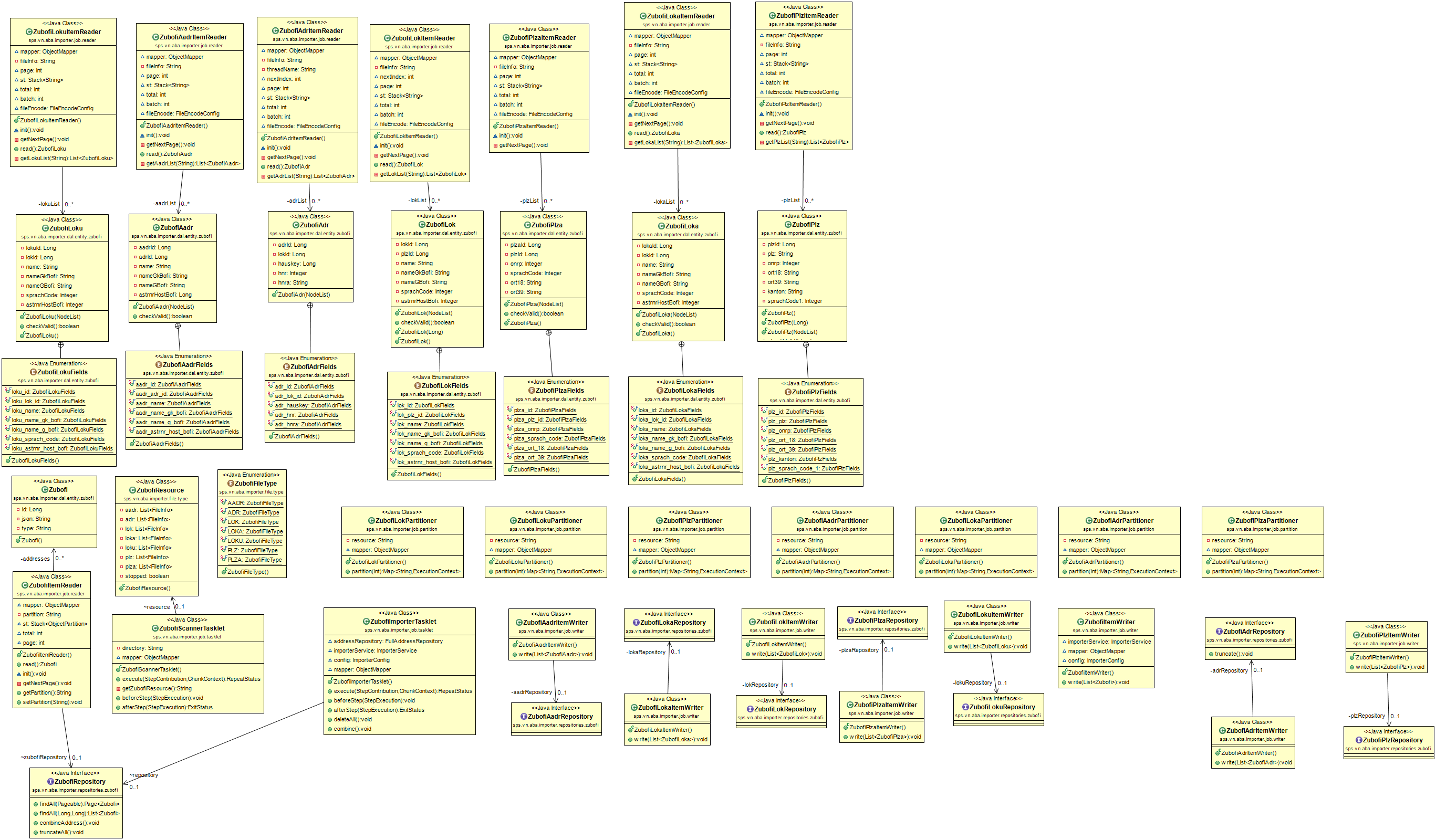


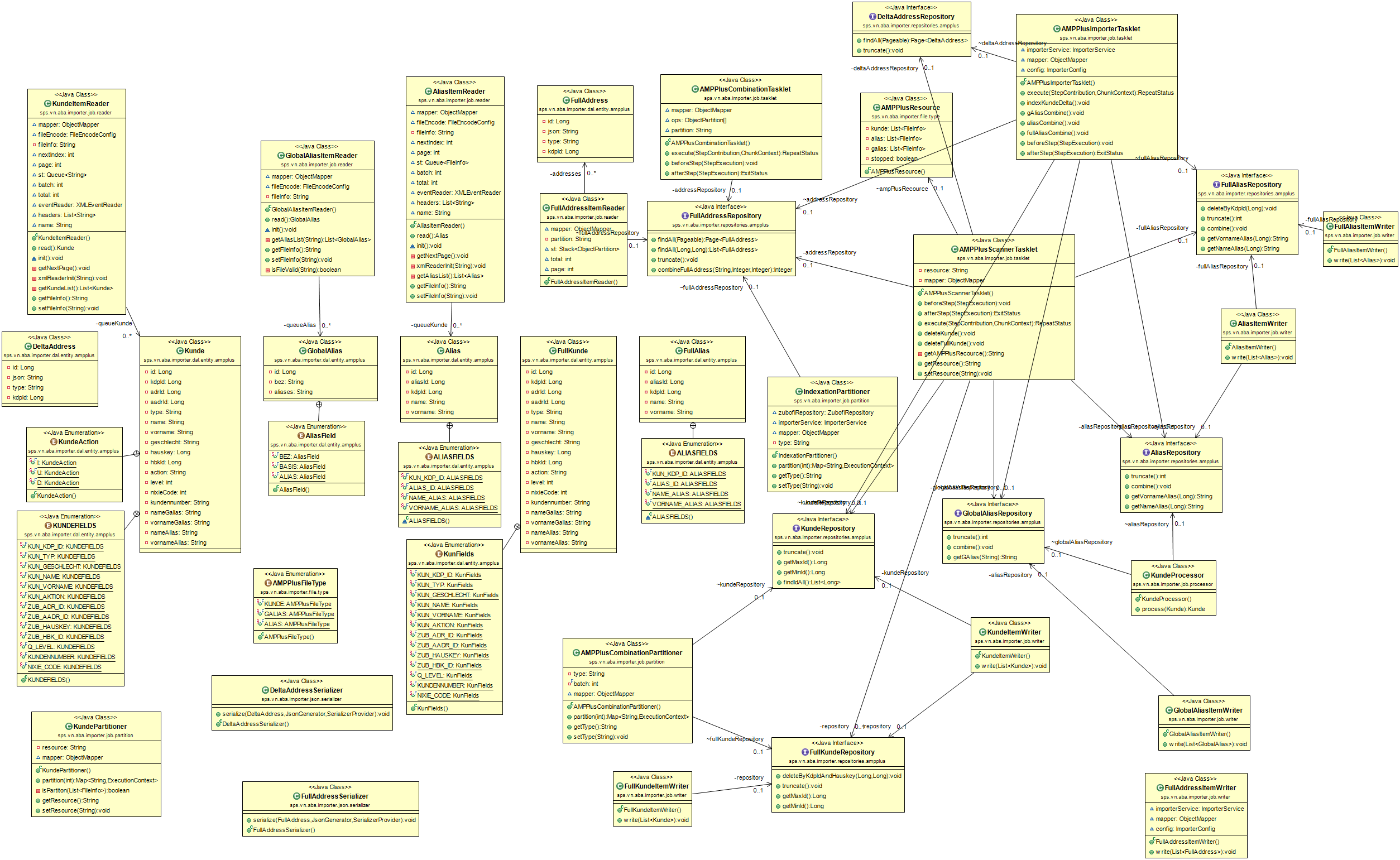
#### Zubofi



### Class Diagrams



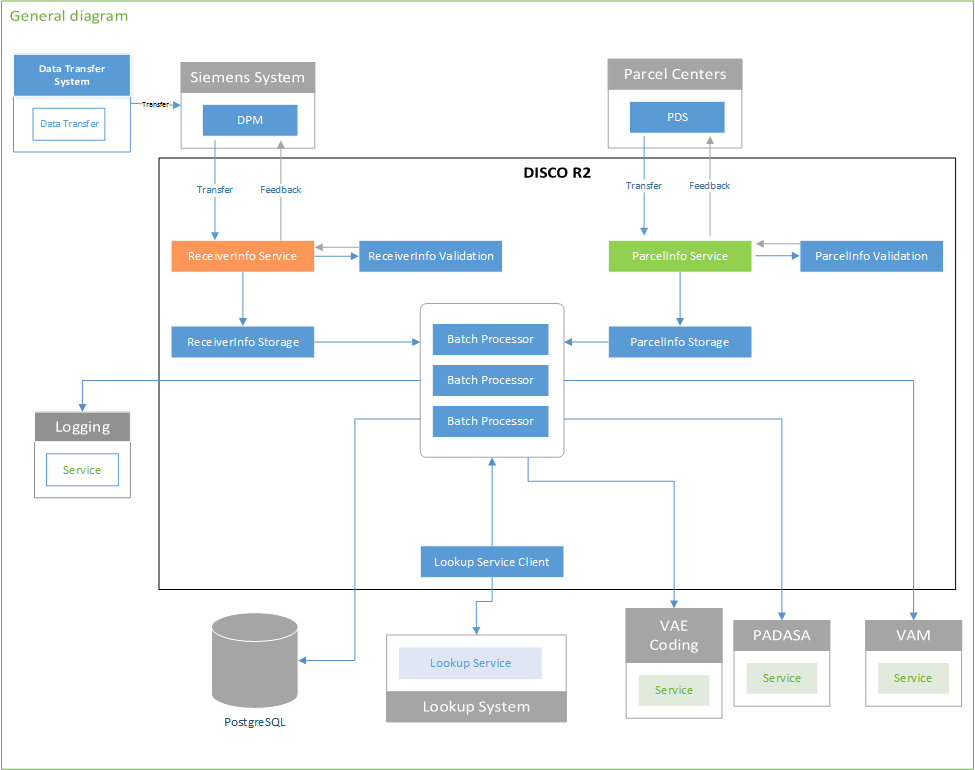




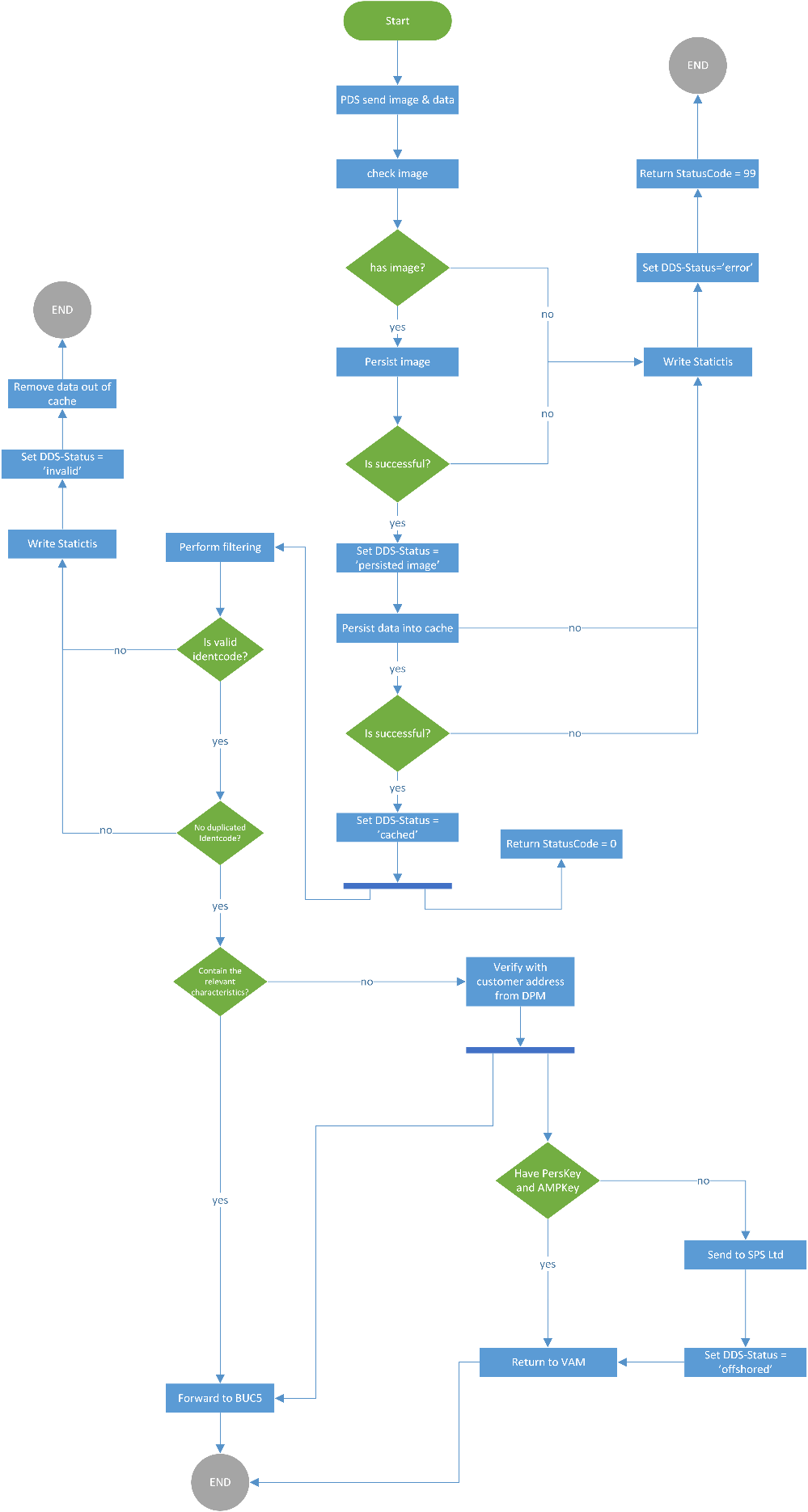
## DDS Core Business

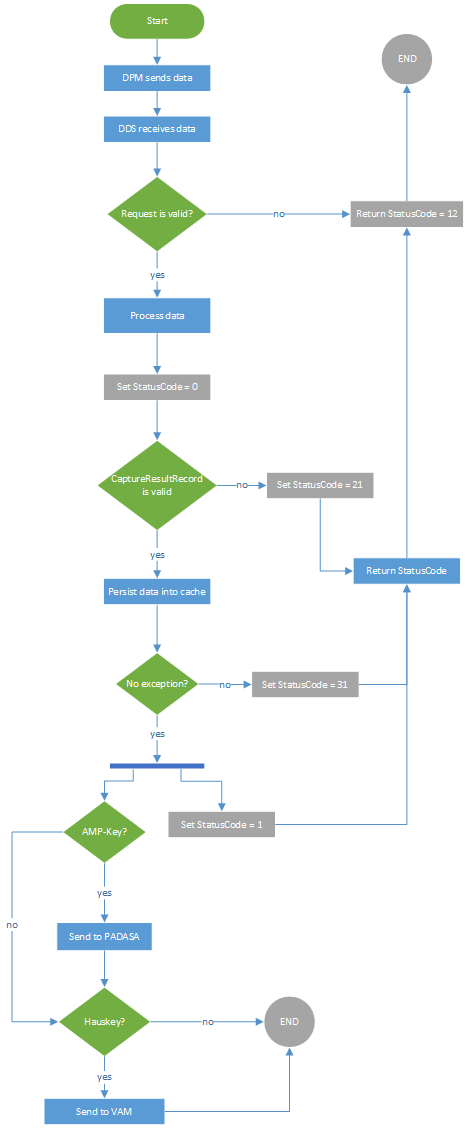


### Overview



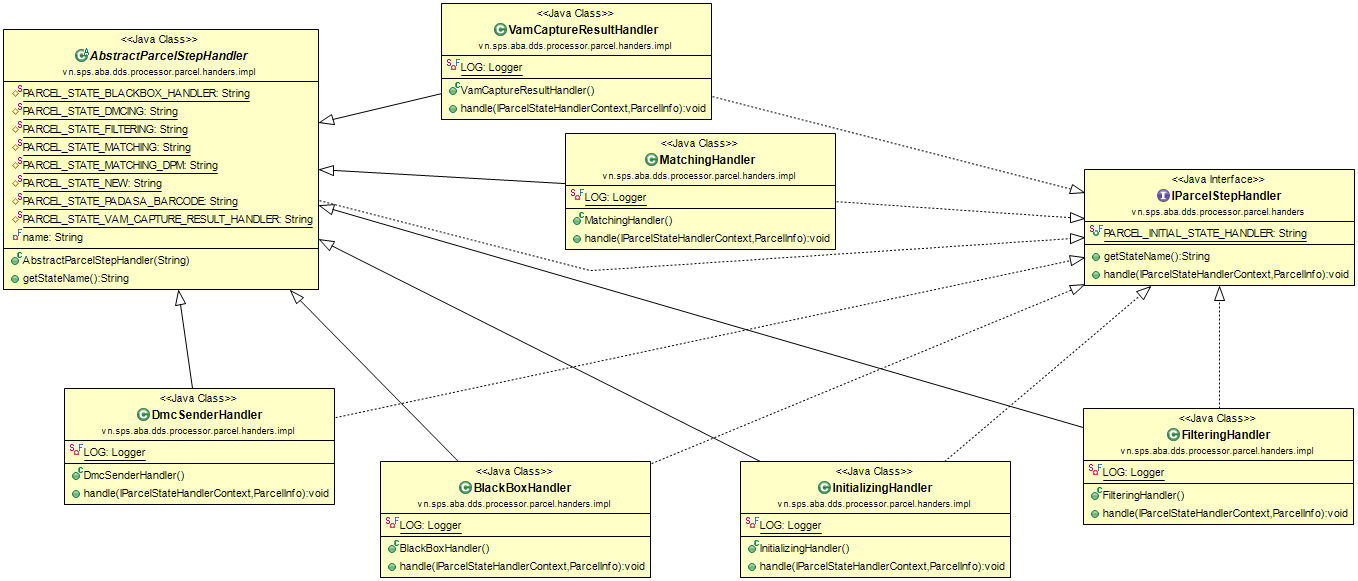
### Activity Diagrams



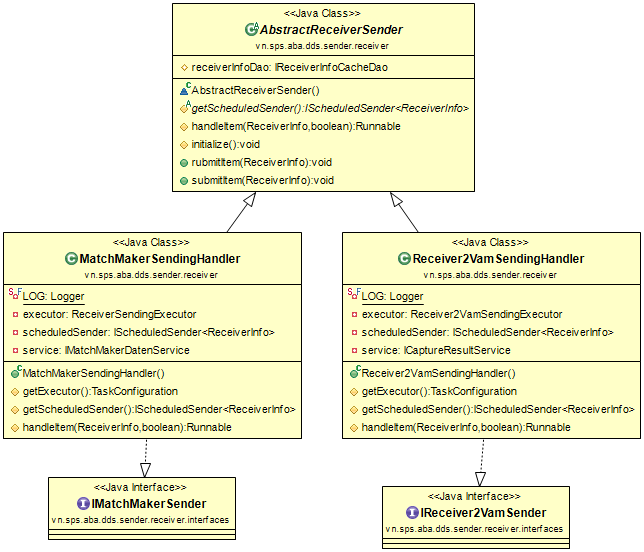


### Class Diagrams

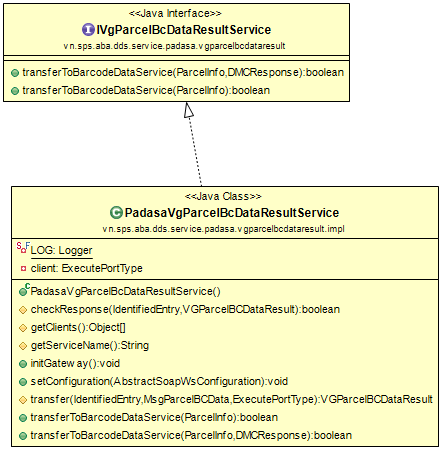
#### Parcel (PDS)



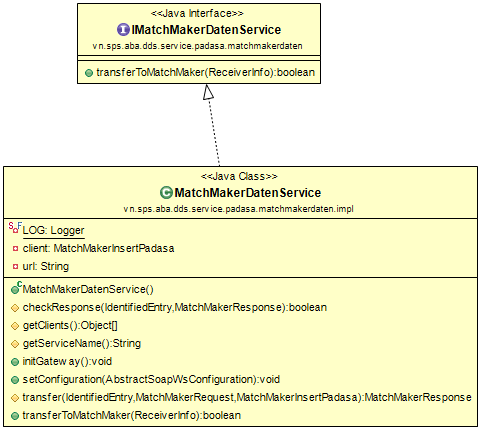
#### Receiver (DPM)



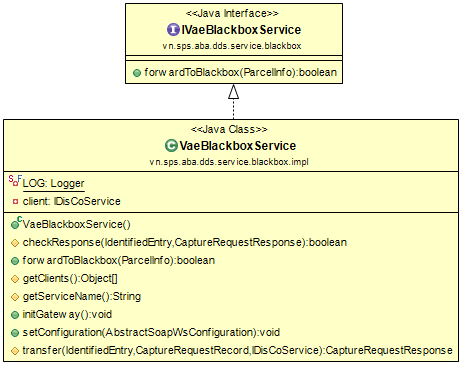
#### Padasa-Barcode



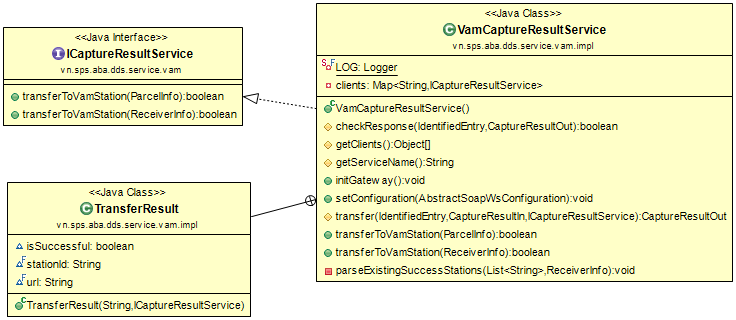
#### Padasa-Matchmaker



#### VAE



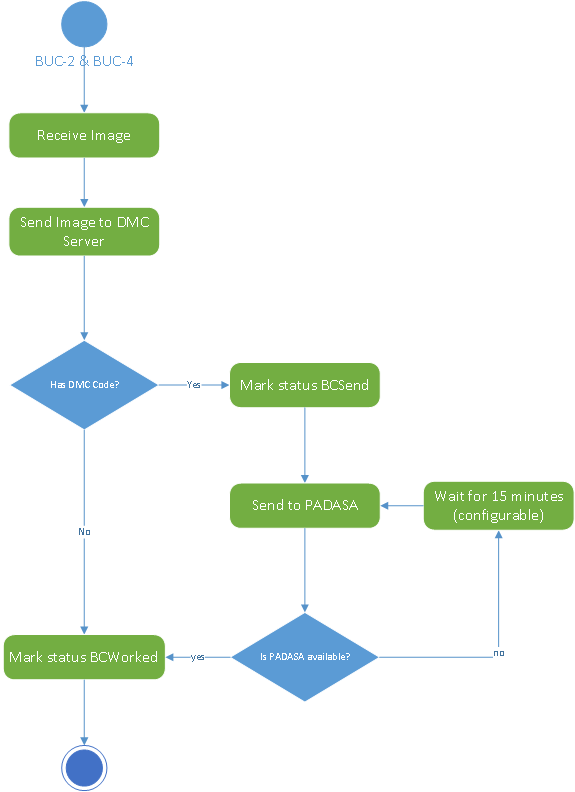
#### VAM



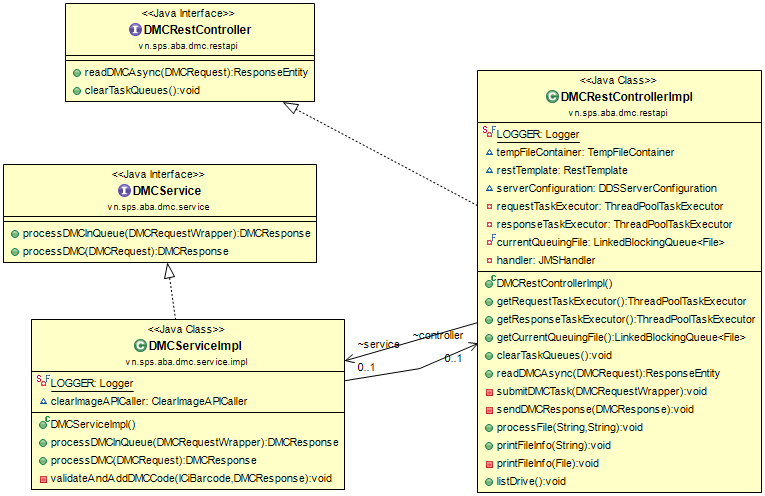
## DMC Processing



### Activity



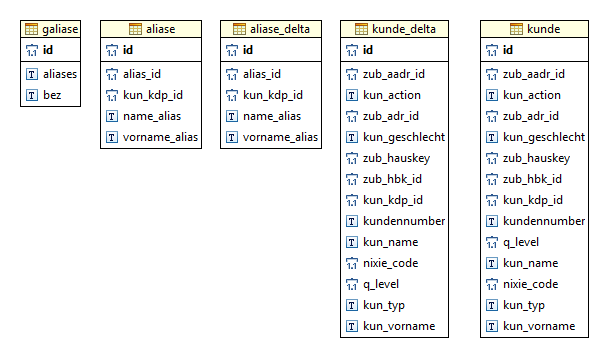
### Class diagrams



# Database Design

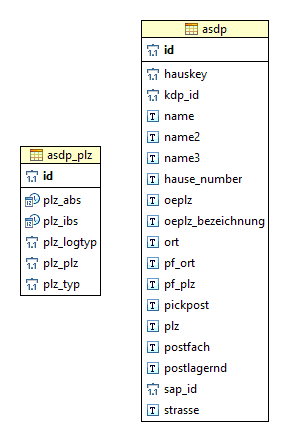
## Master Data

### AMPplus

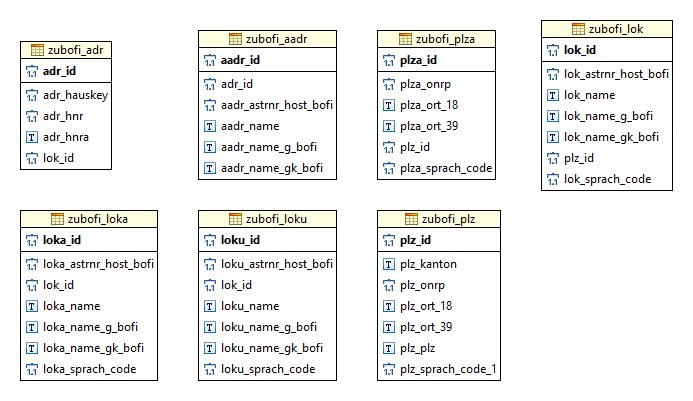


|  |  |
| --- | --- |
| **No** | **Foreign key constraint** |
| 1 | aliase.kun\_kdp\_id = kunde.kun\_kdp\_id |
| 2 | aliase\_delta.kun\_kdp\_id = kunde\_delta.kun\_kdp\_id |

### ASDP

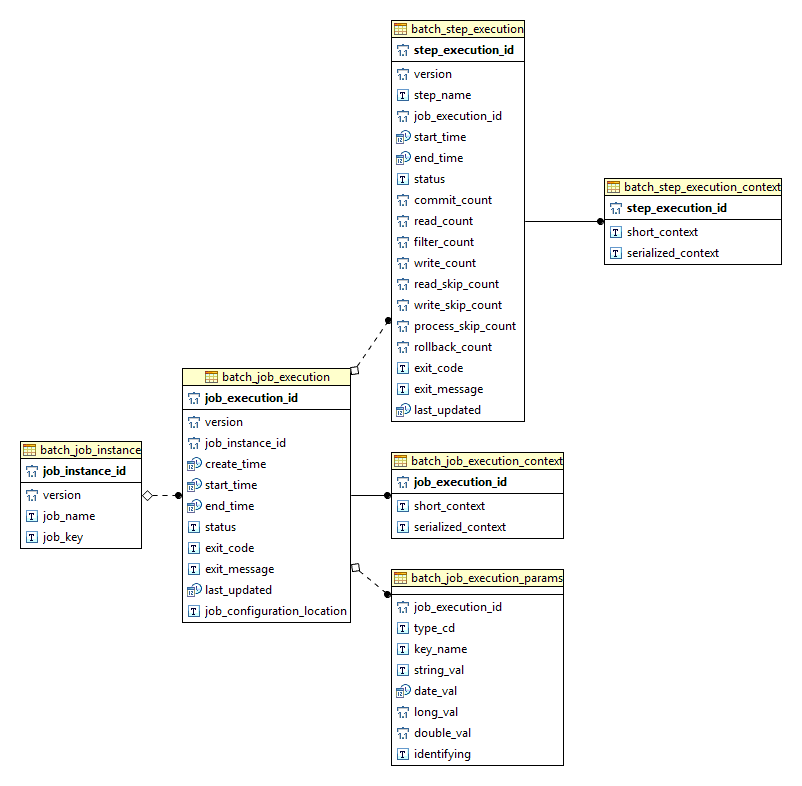


### Zubofi

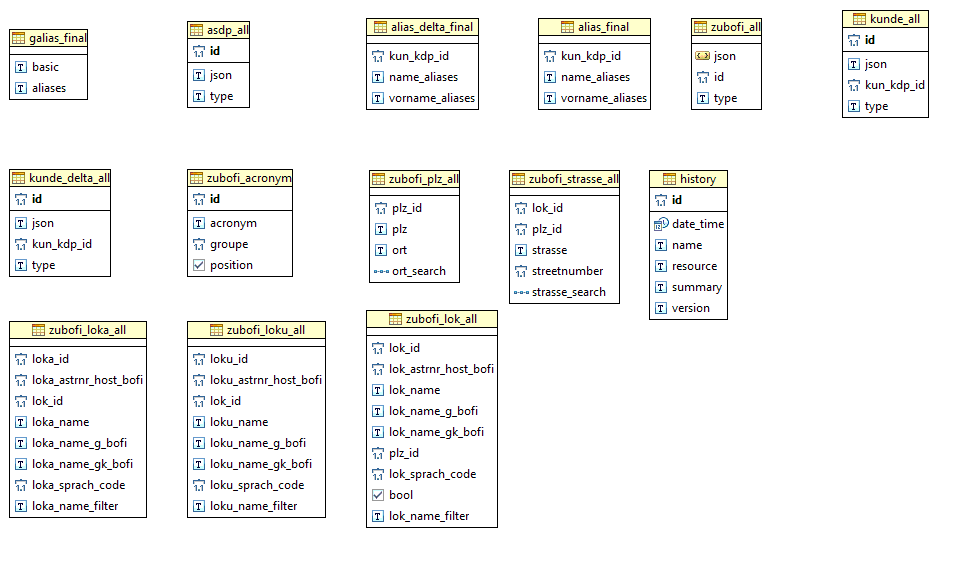


|  |  |
| --- | --- |
| **No** | **Foreign key constraint** |
| 1 | zubofi\_aadr.adr\_id = zubofi\_aadr.adr\_id |
| 2 | zubofi\_aadr.lok\_id = zubofi\_lok.lok\_id |
| 3 | zubofi\_loka.lok\_id = zubofi\_lok.lok\_id |
| 4 | zubofi\_loku.lok\_id = zubofi\_lok.lok\_id |
| 5 | zubofi\_plz.plz\_id = zubofi\_lok.plz\_id |
| 6 | zubofi\_plz.plz\_id = zubofi\_plza.plz\_id |

### Batch Job

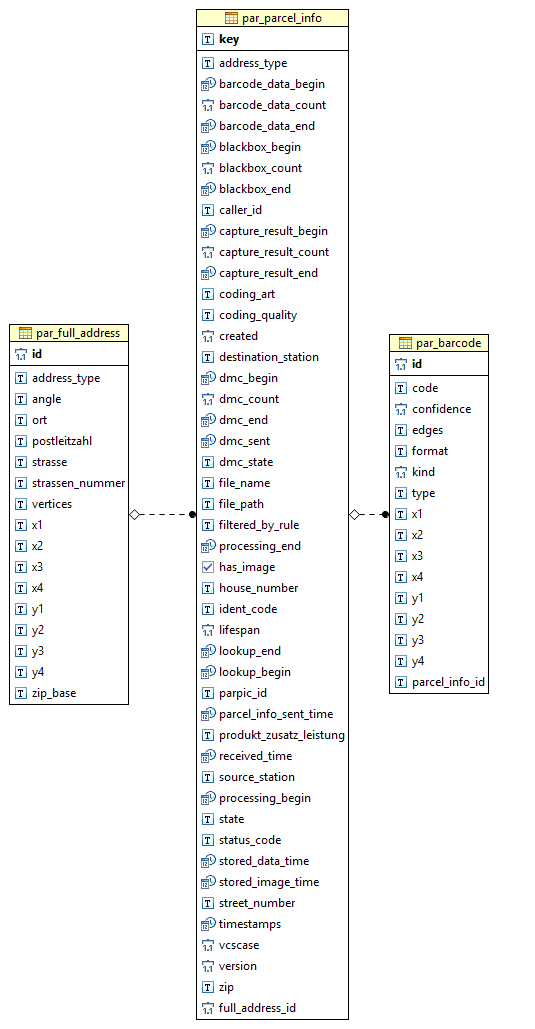


### Combination

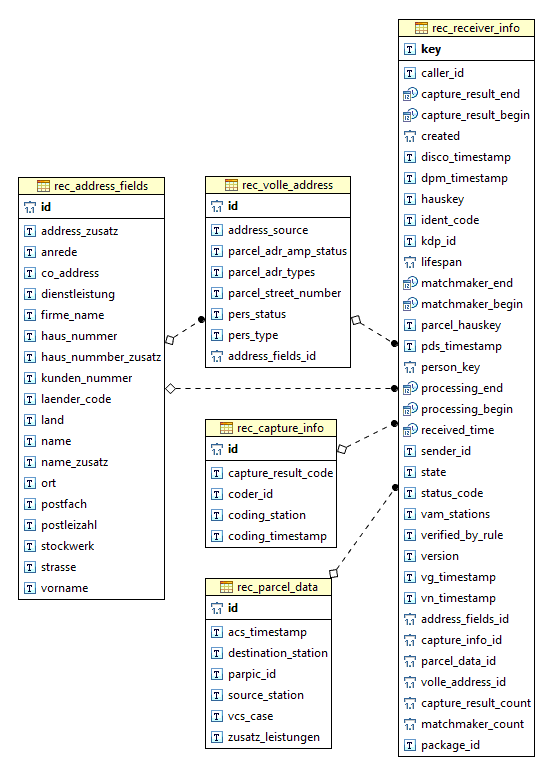


## DDS

### Parcel (PDS)



### Receiver(EAI or DPM)



# Infrastructure Design

Reference to :

<https://tools.spsdscloud.com/confluence/display/VNABA/ABA+System>