

TechTRONS

GoSPED – SIFM Integration – Sikkim
Government

Problem Statement

Sikkim Government Finance Department uses SIFMS systems to do financial management

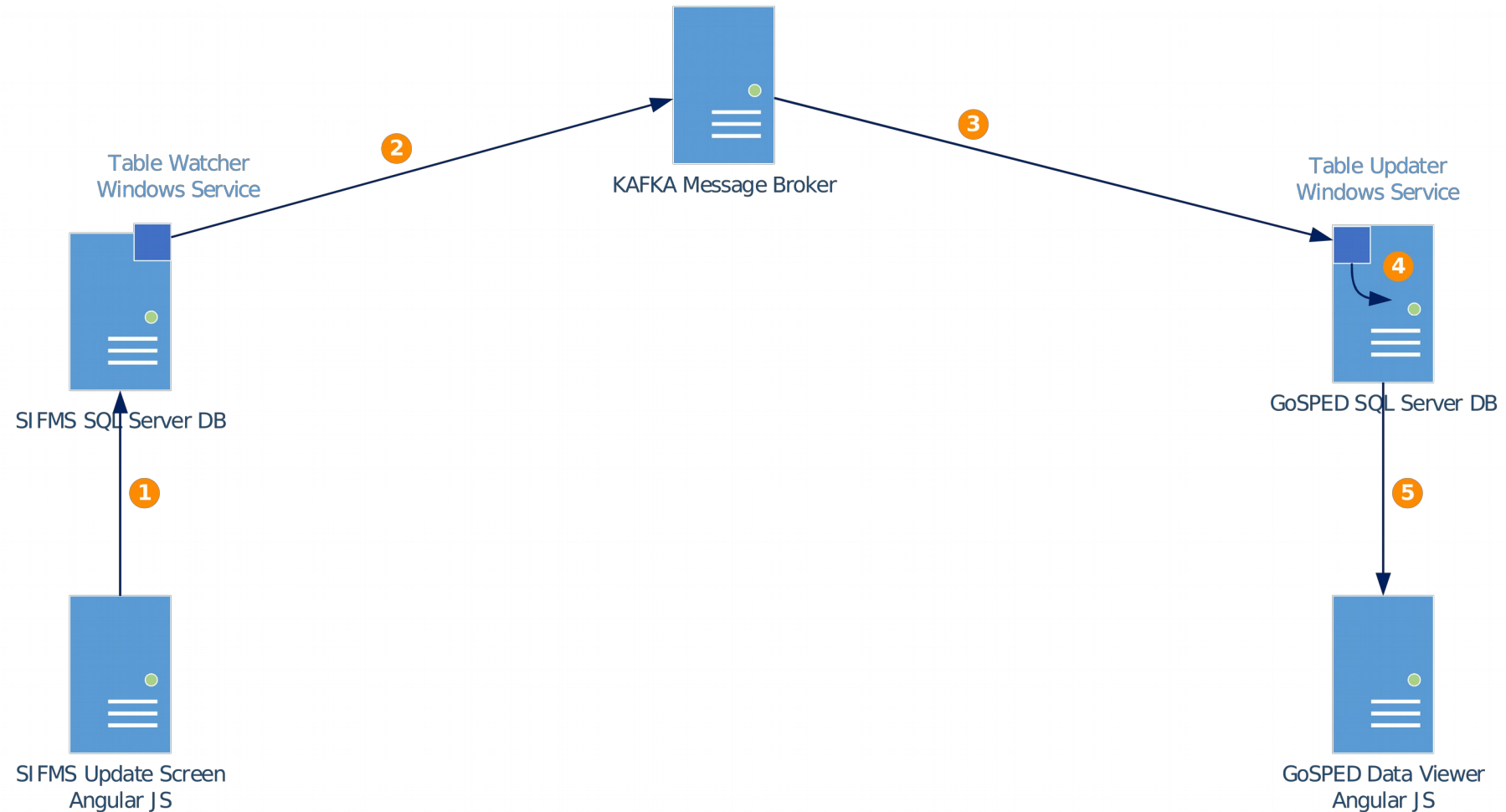
GoSPED is a pension management system

Any change in Government Employee Data is transmitted from SIFMS to GoSPED on regular interval

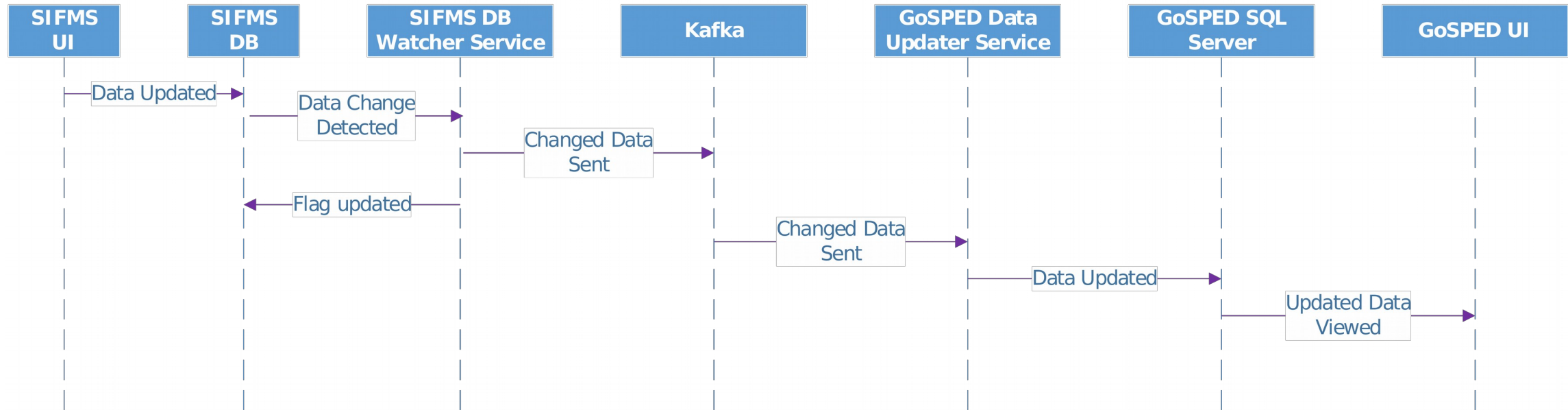
Currently there are data losses that GoSPED is experiencing during propagation

The data is currently updated only once in a day

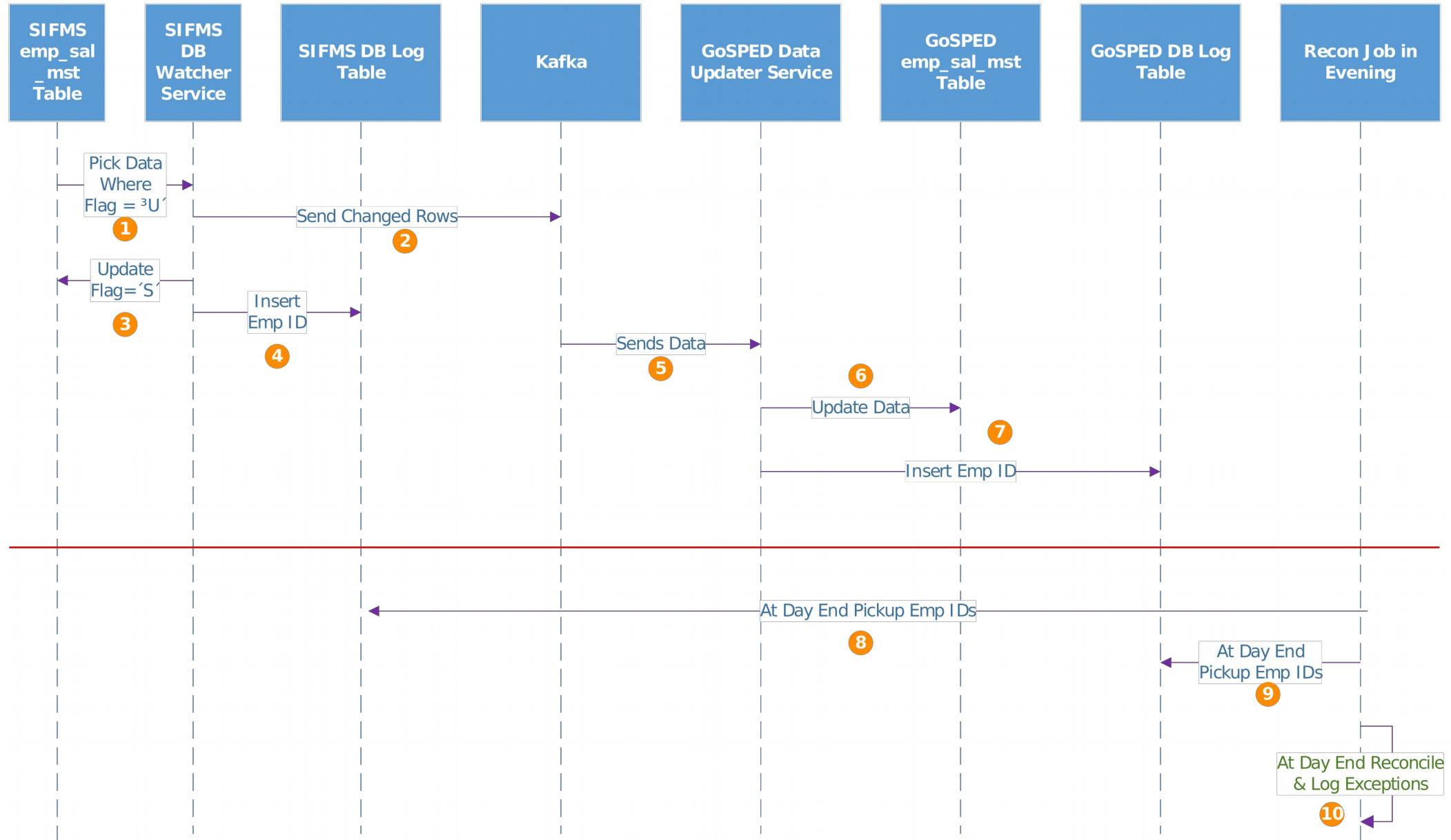
Solution - Design



Control Flow



Data Flow



Data Loss Checks

Kafka will run in “Exactly Once” mode

Message will be sent exactly once

If Kafka is down, the producer will re-try to send for all updated rows

If Receiver is down, Kafka will persist the message with it

The receiver will delete data from Kafka only after data is updated in SQL Server Database

At end-of-day, there will be a reconciliation run between log table in sender database and receiver database. All exception will be logged

Salient Features

Resilient and assured message delivery will ensure any change in the SIFMS database will propagate to GoSPED

The changes will get propagated in interval of 5 minutes

No loss of message and data

Integration done with minimal or no code changes in SIFMS and GoSPED

Kafka message broker will enable Sikkim Government to integrate any number of systems with SIFMS and GoSPED

Demo

Laptop 1 □ Represents SIFMS Database

Laptop 2 □ Represents GoSPED Database. Also has Kafka Message Broker

Angular JS UI will Update the data in SIFMS Database

Data will be Propagated from Laptop 1 to Laptop 2

GoSPED Angular JS UI will show the updated data