Mongo Logback Appender System Logs

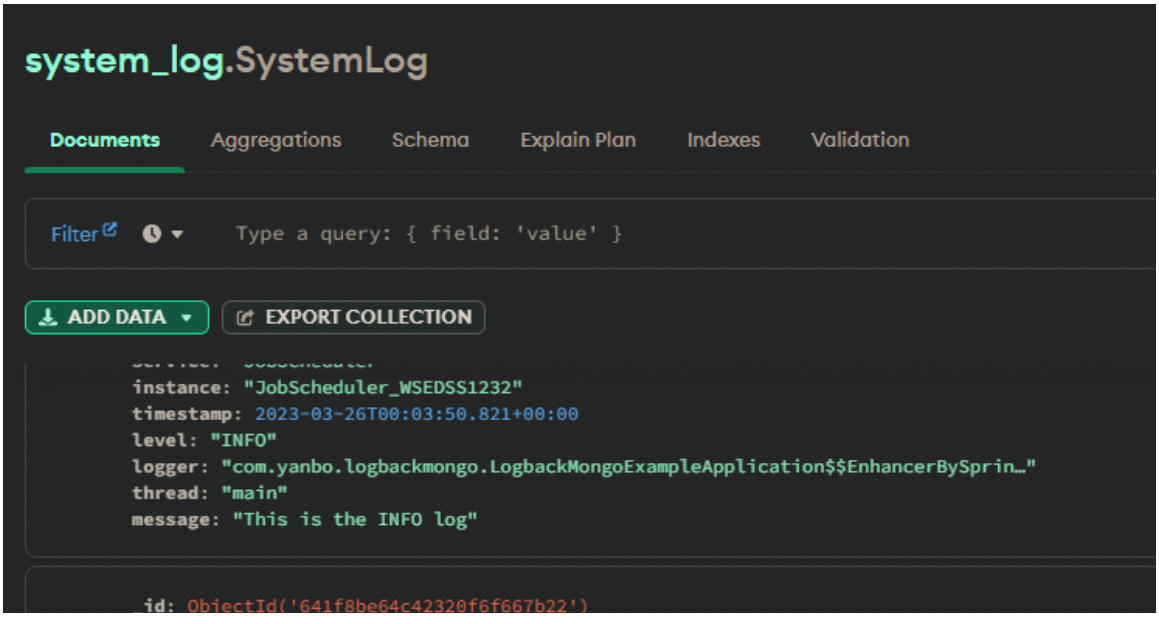
Saturday, March 25, 2023 7:07 PM

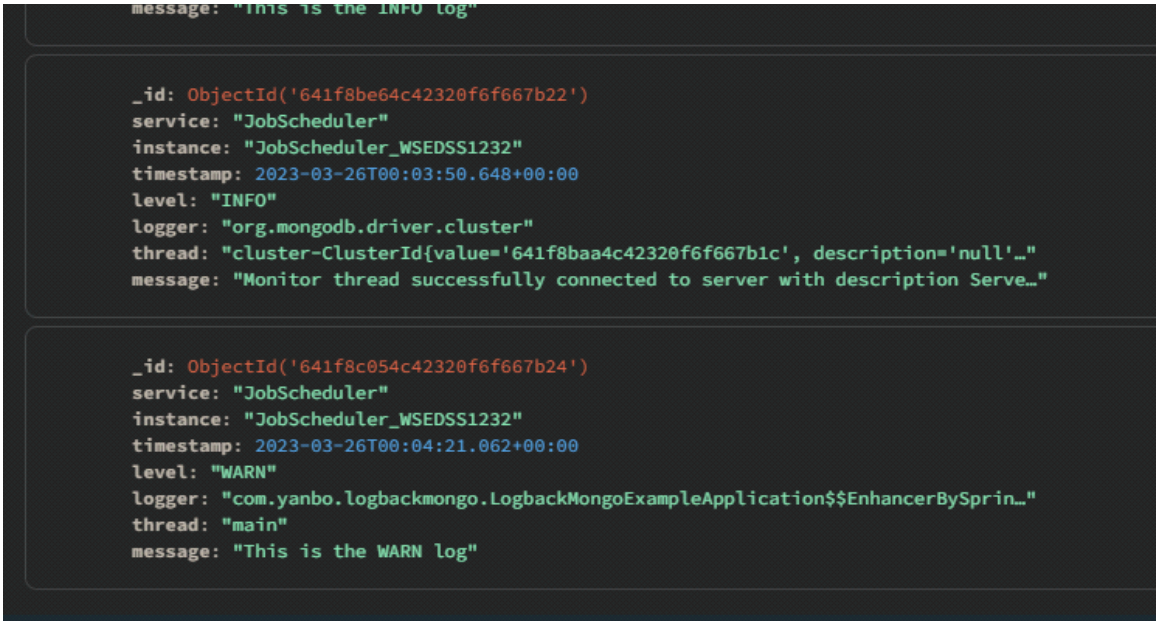
These design notes specify how the system log data for the eligibility and settlement microservices should be sent to a central mongodb collection
Example code: https://github.com/btparker-work/logback_mongodb_appender.git

The system log data for the eligibility and settlement microservices should be sent to mongodb and tagged by:

- Service: name of service when running in AKS
- Instance: name of service instance in AKS
- Timestamp: time of log entry EST
- Level: log level, with default by environment as
    - INFO - dev, test (TRACE and DEBUG as needed)
    - WARN - qa, prod
- logger, thread as they come
- Message: format to give at least first 1000 characters but that is maximum

```
// customize the document
private Document getDocument(LoggingEvent event) {
    Document doc = new Document();
    // append the fields fetched from the event
    doc.append("service", "JobScheduler");
    doc.append("instance", "JobScheduler_WSEDSS1232");
    doc.append("timestamp", new Date(event.getTimeStamp()));
    doc.append("level", event.getLevel().toString());
    doc.append("logger", event.getLoggerName());
    doc.append("thread", event.getThreadName());
    doc.append("message", event.getFormattedMessage());
    return doc;
}
```



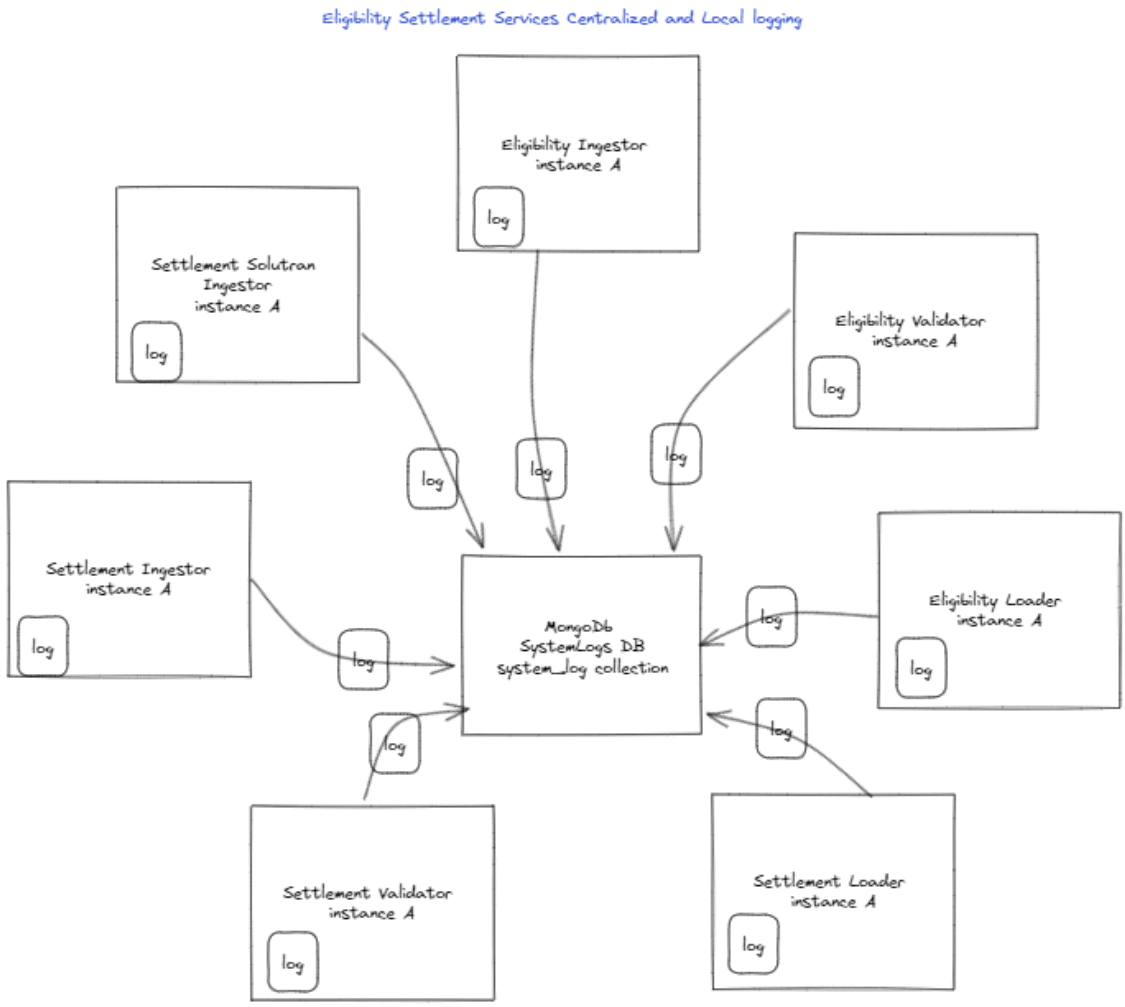


A custom logback appender is required to bind logback to mongodb. This is done by creating an appender extended from UnsynchronizedAppenderBase<LoggingEvent>.

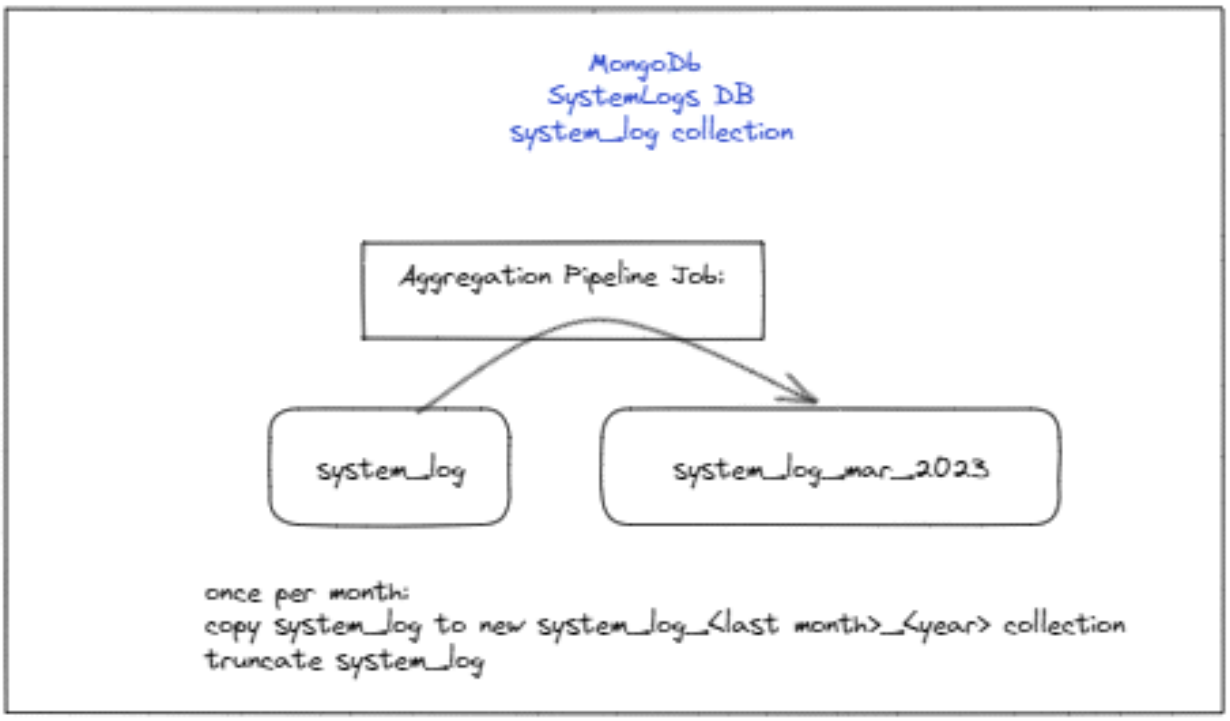
```
public class MongoAppender extends UnsynchronizedAppenderBase<LoggingEvent> {
    private MongoClient mongoClient;
    private MongoCollection<Document> collection;
    private String databaseName;
    private String collectionName;
    private String connectionUri;

    public MongoClient getMongoClient() {
        return this.mongoClient;
    }
```

The logback-spring.xml file should get it's mongodb connection values via <springProperty> entries or similar.

Make sure to log locally to a file as well as to mongodb for some redundancy.



Make sure there is a job (probably done with mongodb pipeline aggregation) that will copy log files to a backup collection.


MongoDb
SystemLogs DB
system_log collection
Aggregation Pipeline Job:
system_log
system_log_mar_2023
once per month:
copy system_log to new system_log_<last month>_<year> collection
truncate system_log