# Tasks

* Integrate winston logger <https://github.com/winstonjs/winston> into the applications
* Mount volume from the app containers where log file is placed to the local system.
* Extend existing docker compose to add elasticsearch, kibana and file beat. Configure Filebeat to watch files on your local system and send them to the elasticsearch.
* Create new winston transport for ELK <https://github.com/vanthome/winston-elasticsearch>
* Run application and execute couple queries, check that logs are sent to the elastic search and accessible in kibana
* Integrate traces from Jaeger (use logger configuration value). Example tutorial <https://logz.io/blog/jaeger-tracing-nodejs/>

# Links

* NestJS Logging Tutorial <https://docs.nestjs.com/techniques/logger>
* Winston logger tutorial <https://stackify.com/winston-logging-tutorial/>
* Winston repository <https://github.com/winstonjs/winston>
* Express Middleware for Winston <https://github.com/bithavoc/express-winston>
* Winston Elasticsearch transport <https://github.com/vanthome/winston-elasticsearch>
* ELK Configuration example <https://www.sarulabs.com/post/5/2019-08-12/sending-docker-logs-to-elasticsearch-and-kibana-with-filebeat.html>

# Result

* Docker-compose with logging must be committed to the git.
* Screenshot of logs with tracing id.
* Commit name System-observability-session-2