

1) One of the big advantages of using topic-based communication compared to request-response architecture is loose coupling. It makes network agents to be able to work independently and to not rely too much on external dependencies. This way temporal downtime of a communicating party is not as fatal and the work can be continued, when the functionality is restored. Publish-subscribe pattern that topic-based communication represents feels as more natural choice in the context of microservices.

Another advantage over classical server-client architecture that message brokers provide is better scalability. Parallel operations, message caching, routing, queue usage and many other factors allow the network to handle messages from millions subscriber nodes at the same time. This is very beneficial in cloud-native applications.

2) There are a lot of things learned during the project. Among them is ability to write asynchronous code in python and first hand experience in it. Also knowledge of AMQP protocol and its usage become much better. In addition to that the skills in using shell scripts and docker-compose were improved drastically.