

Lab Assignment 2 CMT

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TASK 5

MESSAGE QUEUES

An asynchronous communications protocol used for IPC (Inter Process Communication) or even inter-thread communication. Being asynchronous means that the sender and receiver of the message do not need to interact with the message queue at the same time, the message is placed in the message queue until the intended recipient retrieves it.

There are different types of message queues such as point-to-point and publish/subscribe. While in the point-to-point queue, the sending process will need some information about the receiving application to be able to send a message, such as the queue name or queue manager name. Whereas in the publish/subscribe model, a message is published by the publishing application and may be accessed by any application (subscriber) subscribing the topic.

- Comparing RabbitMQ and ZeroMQ

- ✕ RabbitMQ

This message broker is written in erlang and is one of the leading implementations of the open Advanced Messaging Queue Protocol (AMQP). It is easy to use and deploy since more advanced scenarios such as routing, load balancing and persistent message queuing can be implemented with a few lines of code. It is however in comparison to ZeroMQ, less scalable, has a higher latency due to its central node and quite big message envelopes.

- ✕ ZeroMQ

Moving on to this messaging library, ZeroMQ is specially designed for high throughput/low latency scenarios. It is brokerless, which means that it is possible to run it without a dedicated message broker. It has a much bigger implementation curve as compared to RabbitMQ, which means that any semi-complicated usage will demand much more reading to implement.

- AMQP

The Advanced Messaging Queue Protocol is an open standard application layer protocol for passing messages between applications. It standardizes interoperability between different vendors, providing flow controlled, message-oriented communication and authentication based on SASL and/or TLS.