Communication systems work in synchronous or asynchronous mode. Asynchronous working of a system is based on event paradigm, wherein only the changed state of the system is recorded. This benefits the system performance drastically since redundant tracking of states or data is not performed. Event-based architectures are modeled through a Middleware component which, in a general sense connects Business, Enterprise or Software in a distributed environment. Middleware are essentially based on the publish-subscribe (pub-sub) pattern. Modern software Platforms that fall under Industry 4.0 employs a middleware for communication between entities in the system. This additional layer reduces the connection overhead of the system, which is not the case with the conventional peer-to-peer model. Hence, Messaging systems based on the Middleware approach, with event-driven principle and pub-sub pattern provide added benefits, of dynamic reception of data to all those entities in the system that are interested in a specific data type and maintaining communication links between entities and the Middleware, and not with every other entity within the system. This paper aims to review and evaluate Middleware solutions such as RabbitMQ, ZeroMQ, Mosquitto, Apache Qpid and YAMI4 based on factors such as middleware paradigms, available messaging patterns, middleware performance (message throughput and latency), message priority and queuing, message routing, etc. Based on optimal throughput and latency measures, YAMI4-message oriented middleware (Message Broker) proves feasible for Industry 4.0 platforms. This paper also focuses on the Open issues and solutions with respect to specific middleware types.

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