

What is ActiveMQ? Benefits of ActiveMQ

ActiveMQ is an open source messaging software that serves as the backbone for the architecture of distributed applications built on messaging.



While the ActiveMQ website provides a concise, to-the-point explanation of ActiveMQ, a more detailed analysis of the software is available. The ActiveMQ project website states: "ActiveMQ is an open source implementation of JMS 1.1 as part of the J2EE 1.4 specification."

What is ActiveMQ?

ActiveMQ can be understood as an open source messaging software that serves as the backbone for the architecture of distributed applications built on messaging. The two main reasons why developers created ActiveMQ are:



What is ActiveMQ?

1. The solutions available at that time were proprietary and very expensive.
2. Developers at the Apache Software Foundation are working on an application server (Geronimo) that is fully J2EE compliant. They need a JMS solution with a license compatible with the Apache license.

Since its inception, ActiveMQ has become a strong competitor to commercial solutions such as WebSphereMQ, EMS/TIBCO, and SonicMQ. ActiveMQ is deployed in production environments at some of the leading companies in industries ranging from financial services to retail.

Benefits of ActiveMQ

Using messaging as a form of integration or communication offers many benefits such as:

1. Allows applications built in different languages and on different operating systems to integrate with each other.
2. Location transparency - client applications do not need to know where service applications are located.
3. Reliable communication - message producers/consumers are not always available at the same time. Certain segments along the message's route can go down and come back up without affecting the message's arrival at the service/consumer.
4. Scalability - can scale horizontally by adding more services that can handle messages if too many messages come in.
5. Asynchronous communication - the client can send a message and continue processing other things instead of blocking until the service sends a response. The client can only process the response message when the message is ready.
6. Reduced coupling - the assumptions made by the client and the service are greatly reduced due to the previous 5 benefits. A service can change details about itself, including location, protocol, and availability, without affecting or disrupting the client.

In addition, ActiveMQ has other outstanding advantages. As a free open source software, ActiveMQ can facilitate to bring outstanding advantages to the enterprise. This software has also been proven to be highly reliable and scalable in production environments. To understand more about messaging model, readers can refer to the descriptions of Gregor Hohpe or the book that he and Bobby Woolf wrote about integrating enterprise applications based on messaging.

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