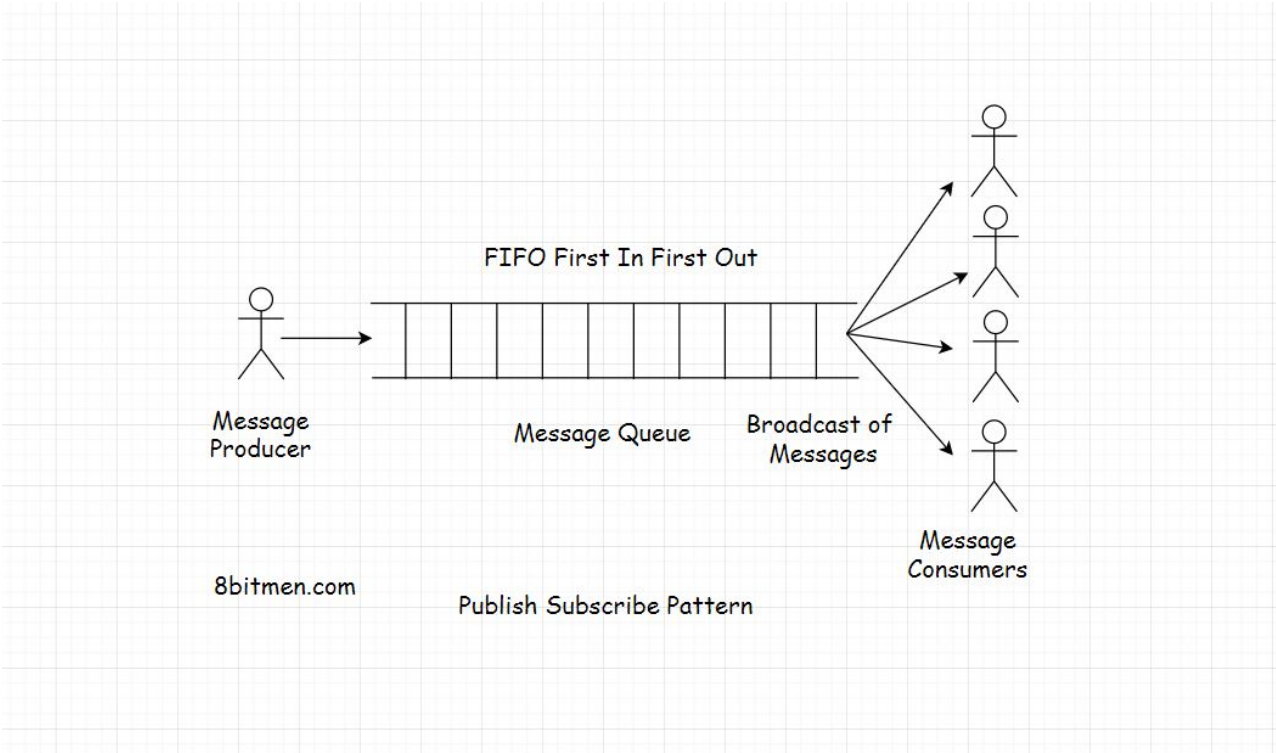
Publish-Subscribe Model

In this lesson, you will learn about the publish-subscribe model, including when it is used and what exchanges are in messaging?

We'll cover the following

What is a publish-subscribe Model?#

> A *publish-subscribe(pub-sub)* model is the model where multiple consumers receive the same message sent from a single or multiple producers.

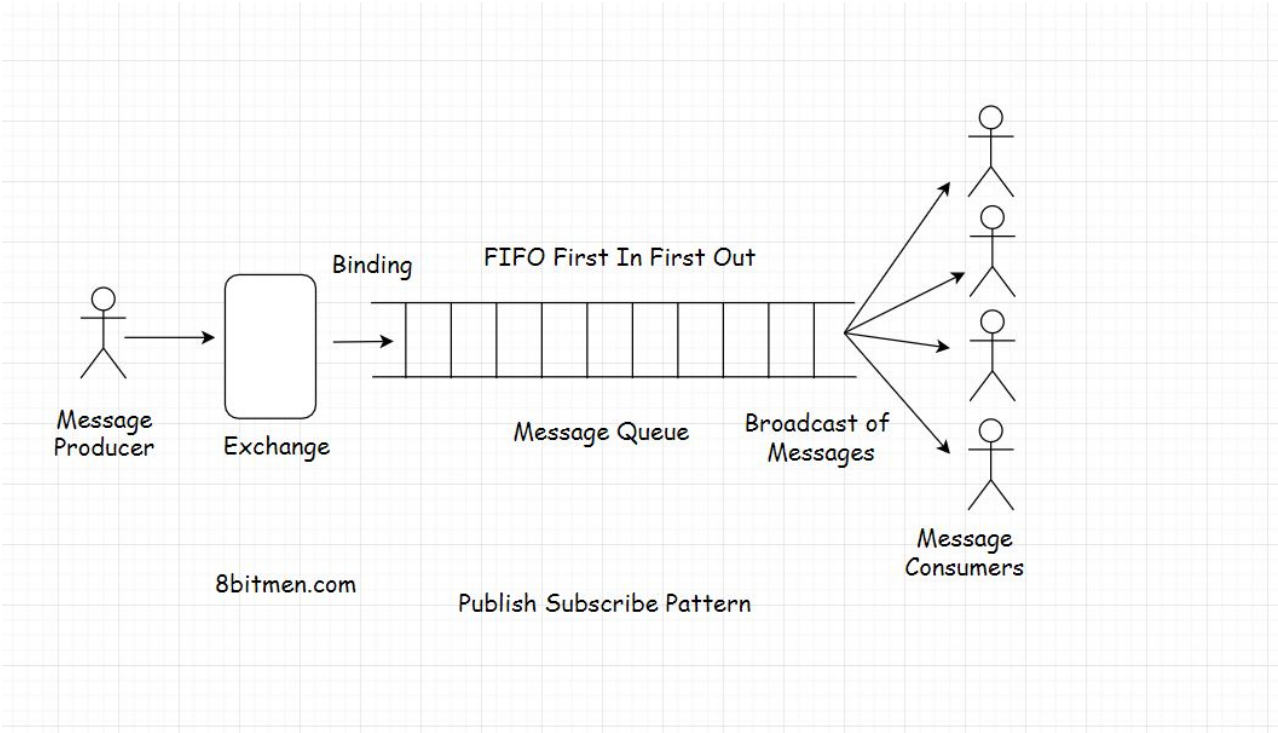


A real-world newspaper service is a good analogy for the *publish-subscribe* pattern. Consumers subscribe to a newspaper service, and the service delivers the news to multiple consumers of its service every single day.

In the online world, we often subscribe to various topics in applications to be continually notified of the new updates on any particular segment, be it sports, politics, economics, etc.

Exchanges#

To implement the *pub-sub* pattern, message queues have *exchanges* that further push messages to the queues based on the exchange type and the set rules. *Exchanges* are just like telephone exchanges, which route messages from sender to the receiver through the infrastructure based on a certain logic.



There are different types of exchanges available in message queues, some of which are, *direct*, *topic*, *headers*, and *fanout*. To get more insight into how these different exchange types work, this RabbitMQ article is a good read (https://www.rabbitmq.com/tutorials/amqp-concepts.html).

There is no certainty that every message queue tech will have the same exchange type. I am just discussing general scenarios here. Things can change with technology. Besides, technology is not important. Right now, all you need is an idea of how things work.

So, we would pick a *fanout* exchange type to broadcast the messages from the queue. The exchange will push the message to the queue and the consumers will receive the message. The relationship between exchange and the queue is known as *binding*.

This is how we get updates of new content generated in real-time on social apps by businesses or individuals followed by a lot of people.

In the upcoming lessons, I will discuss how real-time feeds and notification systems work in social networks powered by the message queues in detail.

Let’s move on to the point-to-point messaging model.

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Introduction to Message Queues

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Point-to-Point Model

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