

Federated Architecture

In this lesson, we will have an insight into the Federated Architecture.

We'll cover the following

- What Is A Federated Architecture?
- How Is Federated Architecture Implemented In Decentralized Social Networks?
- What Is the Need For Pods?

What Is A Federated Architecture?

Federated architecture is an extension to the *decentralized architecture*. It powers social networks like *Mastodon*, *Minds*, *Diaspora* etc.

The term *federated* in a general sense means a group of semi-autonomous entities exchanging information with each other. A real-world example of this would be looking at different states of a country which are managed by the state governments. They are partially self-governing & exercise power to keep things running smoothly. And then, those states governments share information with each other & with a central government making a complete autonomous government.

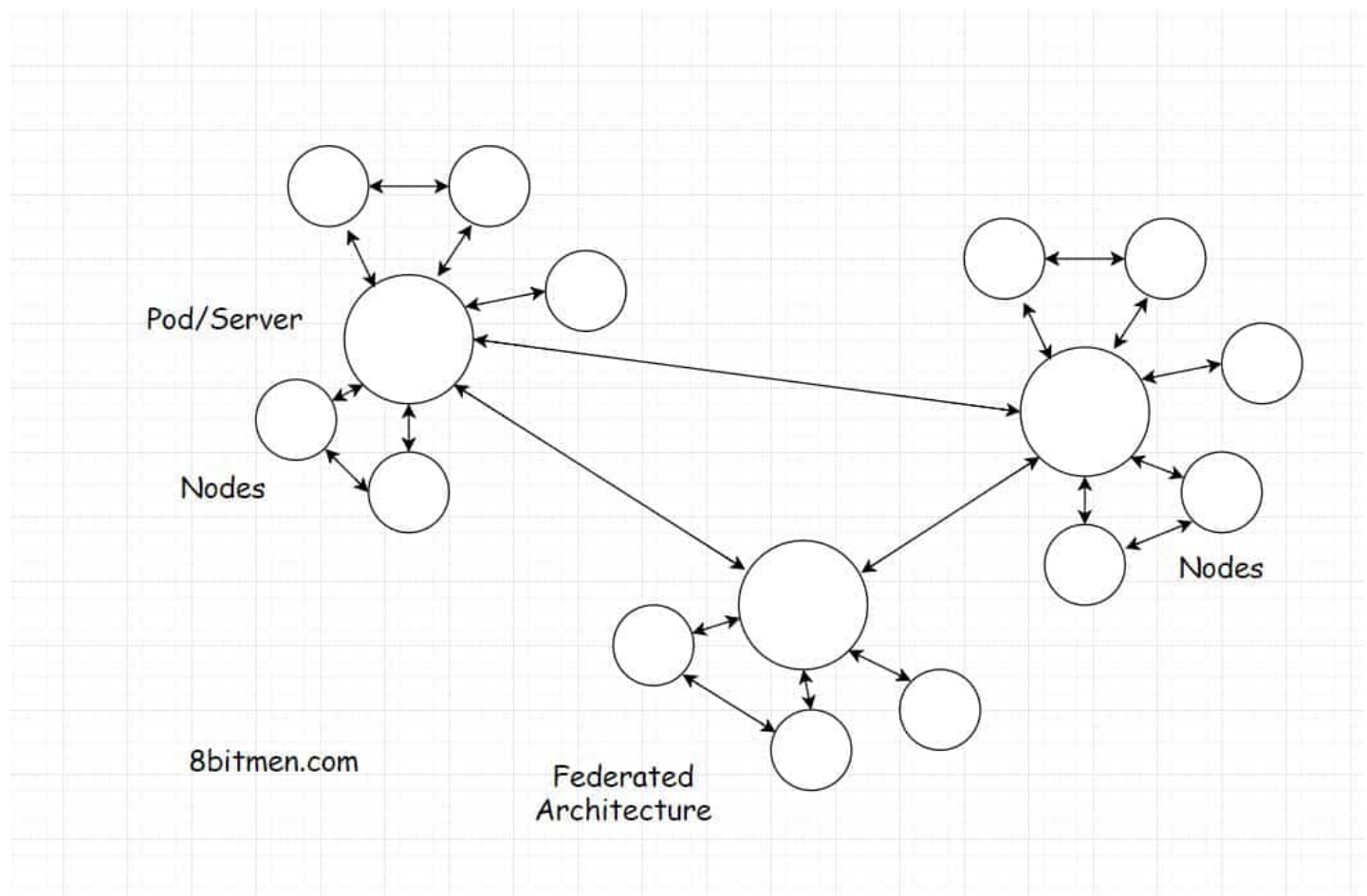
This is just an example. The federated model from a technical standpoint is under continual research, development & evolution. There are no standard rules. Developers, architects can have their own designs in place. After all, it's all *decentralized*. Not under the control of any single entity.

How Is Federated Architecture Implemented In Decentralized Social Networks?

As shown in the diagram below. A federated network has entities called *servers* or *pods*. A large number of *nodes* subscribe to the *pods*. There are several *pods* in the network that are linked to each other & share information with each other.

The *Pods* can be hosted by individuals as it is ideally achieved in a decentralized network. As new *Pods* are hosted & introduced to the network, the network keeps growing.

In case if the link between a few *Pods* breaks temporarily. The network is still up. *Nodes* can still communicate with each other via the *Pods* they are subscribed to.



What Is the Need For Pods?

What is the need for Pods? Can't just the nodes be linked to each other like in a regular peer to peer network?

Pods facilitate node discovery. In a *peer to peer* network, there is no way of discovering other nodes & we would just sit in the dark if it weren't for a centralized node registry or something.

The other way is to run a scan through the network & try to discover other nodes. That's a really time-consuming & a tedious task. Why not just have a *pod* instead.

Okay!! So, everyone, I think I have given you a pretty good insight into the decentralized web.

Let's move on to the next lesson where we talk about picking the right server-side technology

