<https://ieeexplore.ieee.org/abstract/document/8705911>

**What it is** - “Service Mesh, a promising approach to mitigate this situation by introducing a dedicated infrastructure layer over microservices without imposing modification on the service implementations”

**How it works** - “A service mesh infrastructure logically consists of a data plane and a control plane.”

“The data plane is composed of a set of intelligent proxies, which are typically deployed as sidecars [20]. These proxies mediate and control all network communication between microservices. Having visibility to each network packet, the main responsibilities of the data plane include service discovery, health checking, routing, load balancing, authentication/authorization, and observability.”

“The control plane manages and configures the proxies for traffic routing. Additionally, the control plane configures corresponding components to enforce policies and collect telemetry. The control plane works as the brain of a service mesh. It does not require the visibility into the network traffic”

**Common Features** –“Service Discovery, Load Balancing, Fault Tolerance, Traffic Monitoring, Circuit breaking, Authentication and Access Control”

**Open Source Mesh** – “Istio and Linkerd”

[**https://books.google.co.uk/books?hl=en&lr=&id=Mg3aDwAAQBAJ&oi=fnd&pg=PP1&dq=istio+vs+linkerd+vs+consul&ots=dMz0eq\_cog&sig=zW1vApLDj\_LCPQXEmtOHJOL2hac&redir\_esc=y#v=onepage&q&f=false**](https://books.google.co.uk/books?hl=en&lr=&id=Mg3aDwAAQBAJ&oi=fnd&pg=PP1&dq=istio+vs+linkerd+vs+consul&ots=dMz0eq_cog&sig=zW1vApLDj_LCPQXEmtOHJOL2hac&redir_esc=y#v=onepage&q&f=false)

Istio – Richer in features

Linkerd – Focus on performance and simplicity

Consul – Distributed Control Plane

**Has way more content but was written in 2020 may be outdated, recommend get content from project’s docs**