What is Service Mesh ?

Combination of proxy + application forms the foundation of a communication bus known as a *service mesh.* A *service mesh* is a distributed application infrastructure that is responsible for handling network traffic on behalf of the application.

What are Envoy & its capabilities?

Envoy (http://envoyproxy.io) is a service proxy that has emerged in the open source community as a versatile, performant, and application-layer proxy capable of implementing networking concerns like retries, timeouts, circuit breaking, client-side load balancing, service discovery, security, and metrics collection without any explicit language or framework dependencies.

Data plane and the Control plane provide important capabilities:

1. Service resilience
2. Observability signals
3. Traffic control capabilities
4. Security
5. Policy enforcement (Quota, rate limiting, policy on how inter service communication )

Istio is an implementation of a service mesh composed of the following:

1. The data plane, which is composed of service proxies that are deployed alongside applications and complement them by implementing policies, managing traffic, generating metrics and traces, and much more.

1. The control plane, which exposes an API for operators to manipulate the data plane’s network behaviour.