

1. A Kubernetes Service is a stable endpoint that exposes a set of Pods. Since Pods can restart and change IPs, the Service gives a consistent way to reach them using a virtual IP and DNS name. It also load-balances traffic across matching Pods.
2. ClusterIP is only reachable inside the cluster, mainly for internal communication. NodePort exposes the service on a port of every node so it can be accessed from outside.
3. NetworkPolicy is useful when you want only the backend pods to accept traffic from the frontend pods, and block all other pods in the namespace.