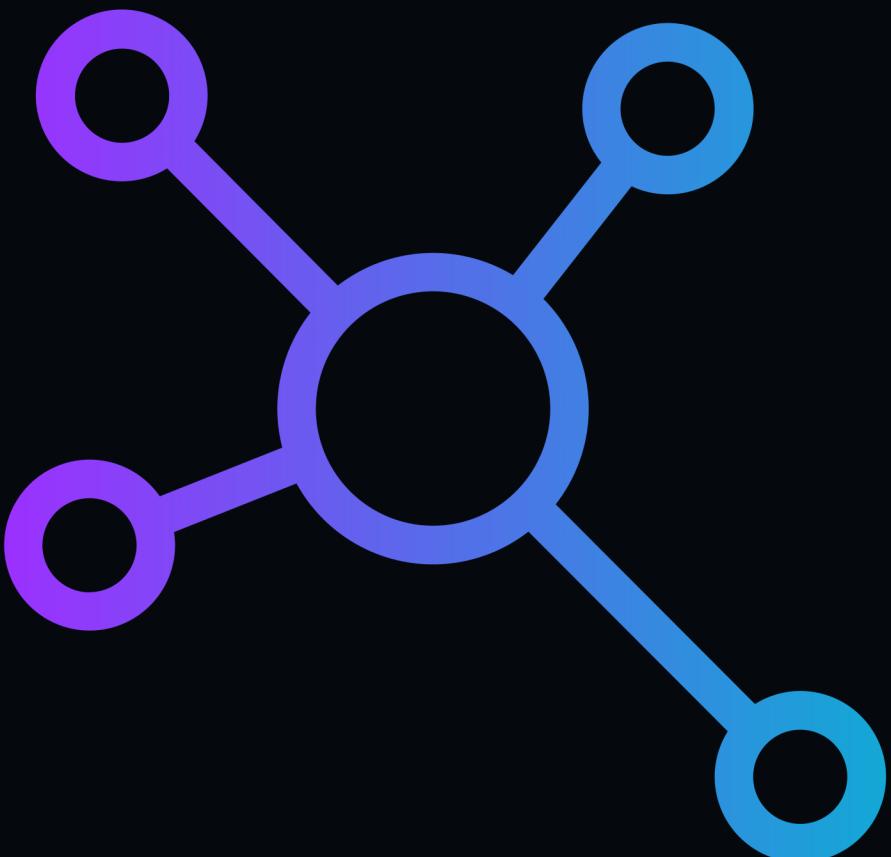


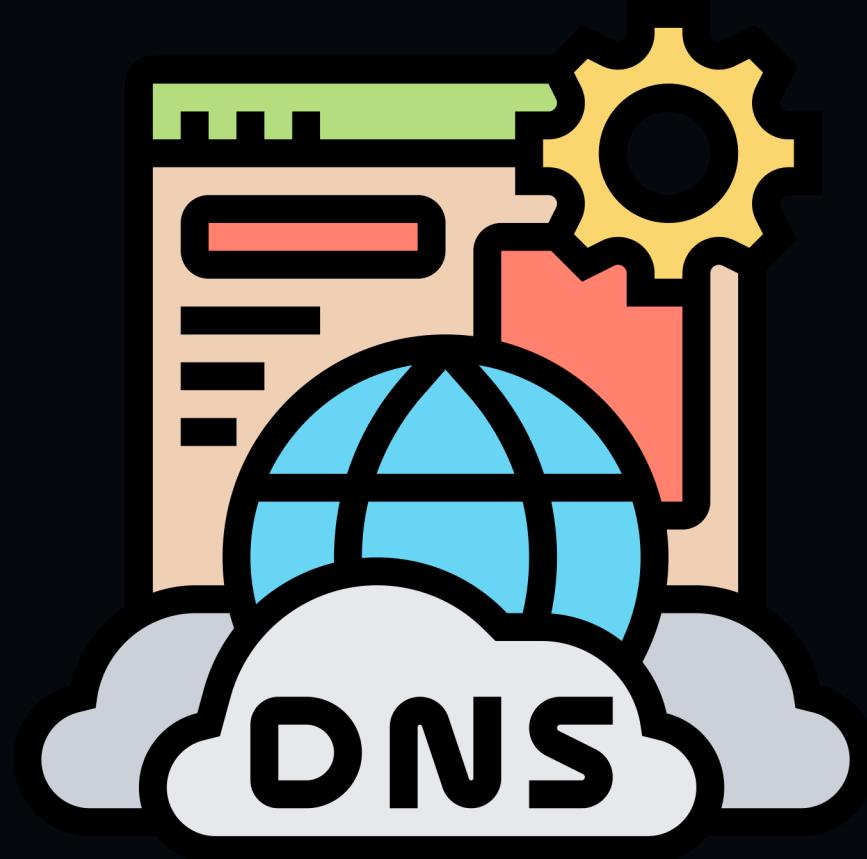
DNS IN K8S

- Can one pod talk to other pod in the **same namespace**?
 - Yes via **ipaddress** or **service**
- Can one pod talk to other pod in the **other namespace** in the cluster?



DNS IN K8S

- Can one pod talk to other pod in the **same namespace**?
 - Yes via **ipaddress** or **service**
- Can one pod talk to other pod in the **other namespace** in the cluster?
 - Yes via **DNS**



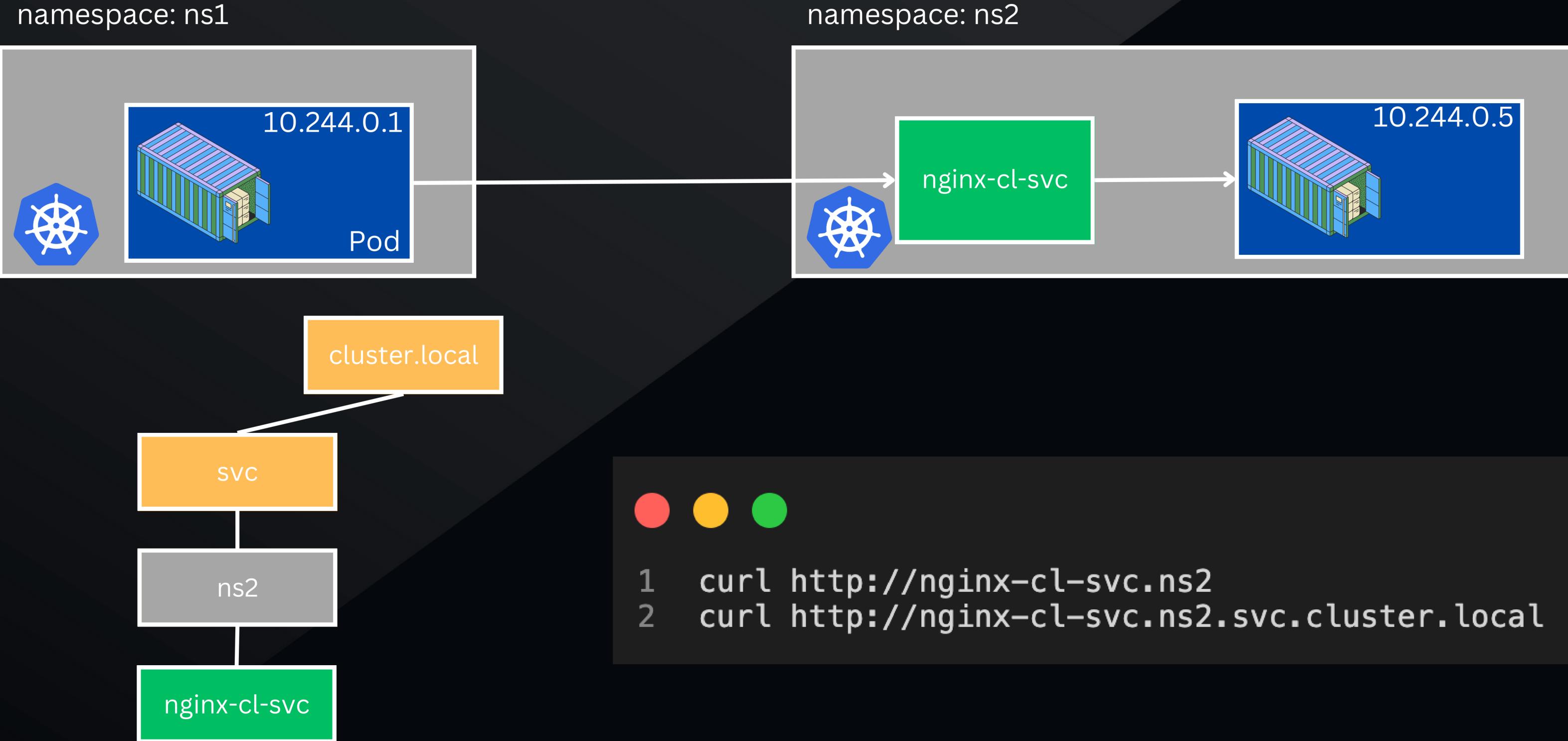
WHAT IS DNS

- DNS stands for **Domain Name System**, and it is a decentralized system that **translates human-readable domain names, such as "google.com", into IP addresses** that computers can use to communicate with each other over the internet.
- When a user enters a domain name into a web browser, the browser sends a DNS query to a DNS resolver, which is responsible for looking up the IP address associated with that domain name. The resolver first checks its local cache to see if it already knows the IP address, and if not, it recursively queries other DNS servers until it receives a response with the IP address.

COREDNS IN K8S

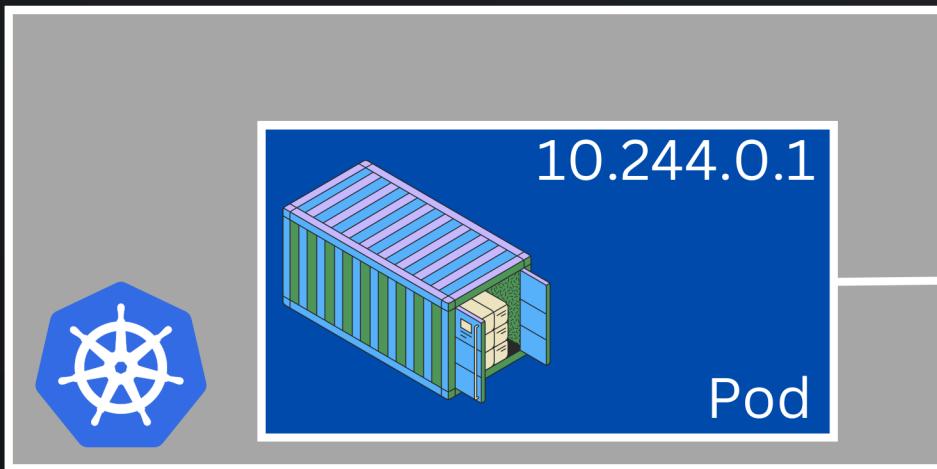
- In Kubernetes, DNS is used to provide a reliable and consistent way for applications running within a cluster to **discover each other using domain names**. Each Kubernetes cluster has a built-in DNS service, called **kube-dns** or **CoreDNS**, which is responsible for providing name resolution for the cluster.
- When a new service is created within a Kubernetes cluster, **the kube-dns service automatically creates a DNS record for the service, using the service name and namespace as the domain name**. This allows other applications within the cluster to discover and connect to the service using its domain name.

CONNECT VIA SERVICE

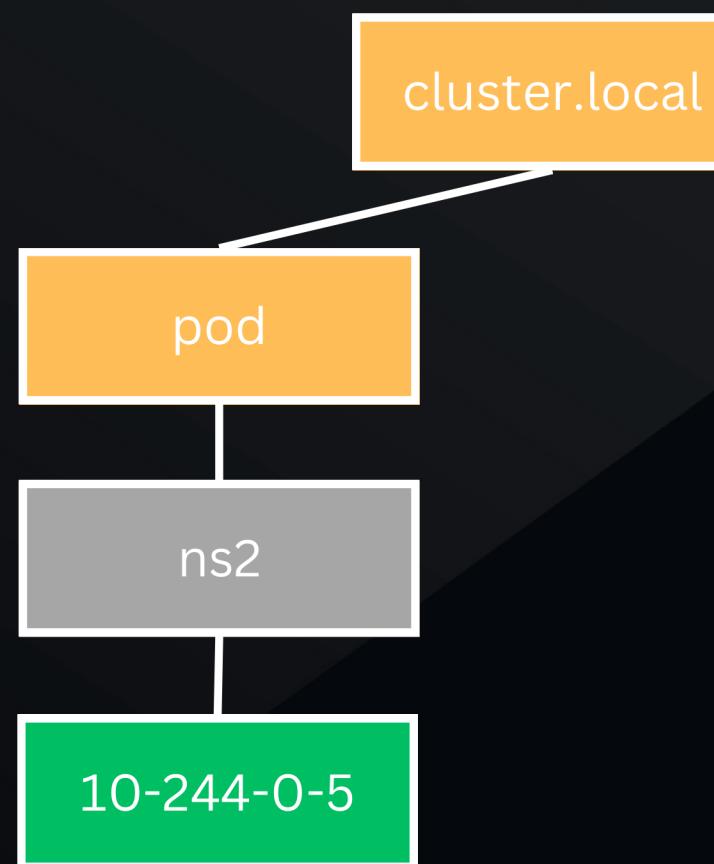
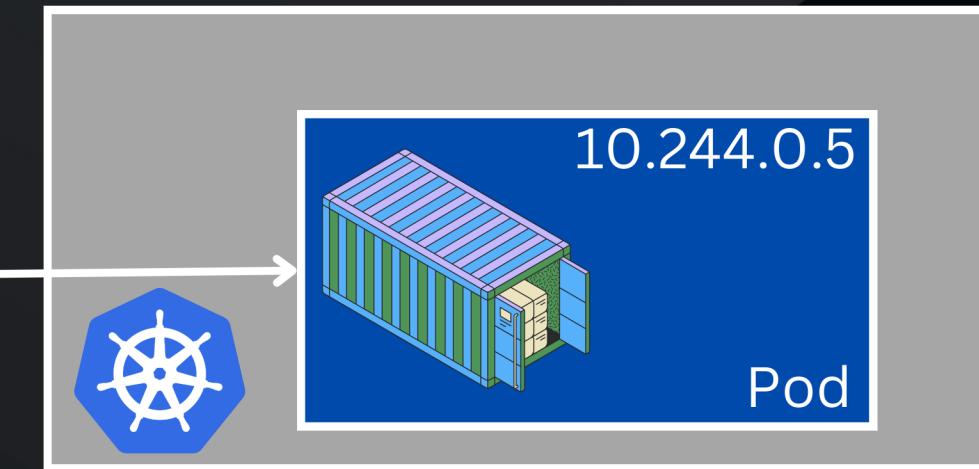


CONNECT VIA IP ADDRESS

namespace: ns1



namespace: ns2



A terminal window showing a command being run. At the top, there are three colored circles: red, yellow, and green. Below them, the command 'curl 10-244-0-5.ns2.pod.cluster.local' is displayed in white text on a black background.