



kubernetes

Kubernetes: Networking

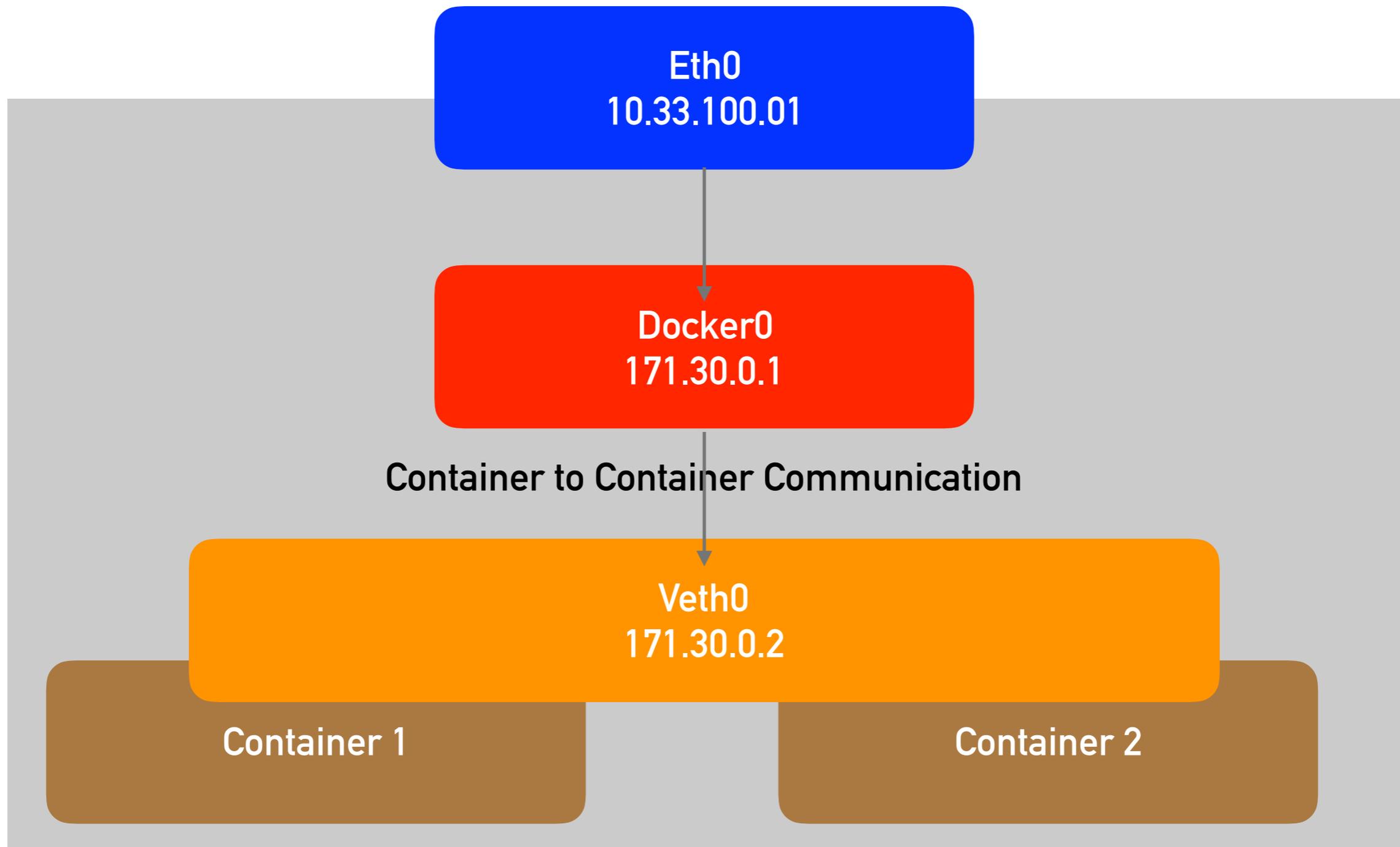
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- The communication between pods, services and external services to the ones in a cluster brings in the concept of Kubernetes **networking**.
- **4 Networking Problems:**
- Container to container communication
- Pod to pod Communication
- Pod to service communication
- External to service Communication

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- Container to Container Communication within the Pod.
- Containers allocated on the same host to **share a network stack and other resources.**
- This implies that all containers in a pod can reach other on a **local host and a port.**
- There are 2 types of communication.
- **Inter-node communication and the Intra-node communication.**

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- **Service:** Services are a type of resource that configures a proxy to forward the requests to a set of pods, which will receive traffic & is determined by the selector.
- Once the service is created it has an assigned IP address which will accept requests on the port.
- There are various service types that give you the option for exposing a service outside of your cluster IP address.

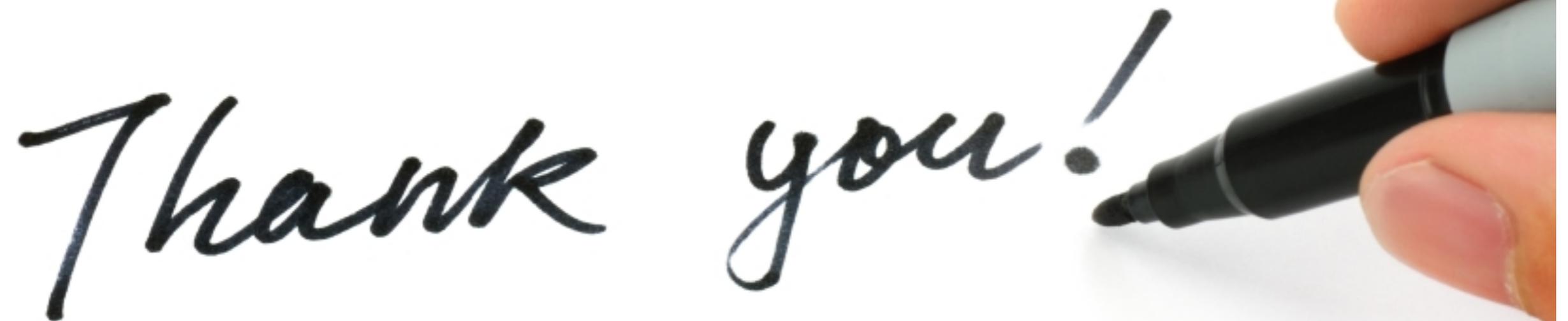
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Types of Services

- **ClusterIP:** This is the default service type which exposes the service on a cluster-internal IP by making the service only reachable within the cluster.
- **NodePort:** This exposes the service on each Node's IP at a static port. Since, a **ClusterIP** service, to which the NodePort service will route, is automatically created. We can contact the NodePort service outside the cluster.
- **LoadBalancer:** This is the service type which exposes the service externally using a cloud provider's load balancer. So, the NodePort and ClusterIP services, to which the external load balancer will route, are automatically created.
- **ExternalName:** This service type maps the service to the contents of the **externalName** field by returning a **CNAME** record with its value.

Will see you in Next Lecture...

Thank you!

A close-up photograph of a hand holding a black marker, writing the words 'Thank you!' in a cursive script on a white surface. The hand is positioned on the right side of the frame, with the marker tip touching the paper. The background is plain white.

See you in next lecture ...