# CoreDNS

In Kubernetes, resources uses DNS names to communicate with each other.

Pods need to be able to resolve those domain names to communicate with other resources. In order to do that, they should have in the /etc/resolv.conf file an IP address of CoreDNS service. That indicates that CoreDNS is used for resolving DNS names.

In CoreDNS logs we can see some information about the traffic.

The iptables is used to control traffic inside the cluster, including communication to the DNS server. We can use it to see for example the firewall rules.

In the CoreDNS configMap, next to the ‘forward’ keyword, is specified either an IP addresses or a path to the file (like /etc/resolv.conf) with IP addresses of the DNS servers which will be resolving DNS names which CoreDNS can’t resolve itself.

# Webhooks

Webhook uses TLS certificates for secure HTTPS communication between Kubernetes API server and Webhook server. It is saved as files on the Webhook server and as the caBundle field in the MutatingWebhookConfiguration or ValidatingWebhookConfiguration.

# Setting up Kubernetes

## Kubernetes config file

This file contains configuration files that kubectl uses to connect and authenticate to Kubernetes and it is located usually at /etc/kubernetes/admin.conf.

When Linux user uses kubectl, then those configuration files specifies which Kubernetes user will be used for executing kubectl commands, like creating resources.

Depending on which configuration files are used, user might see different resources in Kubernetes because of permissions assigned to the Kubernetes user which is used.

## KUBECONFIG variable

This variable indicates a path to the Kubernetes configuration file (admin.conf). If it is not set up then Kubernetes will look for that config file in the default location ~/.kube/config.

## Containerd

Kubernetes uses containerd as a runtime for running containers. Kubelet is communicating with it.

### Containerd.sock

It is a file which is a Unix domain socket. It is used for communication between containerd and clients (like Kubernetes (kubelet) and other CLI tools).

### Crictl

It is a CLI tool used to interact with container runtimes like containerd.

### Crictl.yaml

It is a configuration file used by the circtl. Amoung the others it specifies a path to the socket (the .sock file) to use.