

# Module\_D2\_K8S\_Report

## Задание D2.4.1

1. Поднимите у себя локальный **K8S**-кластер с помощью **Minikube**.
2. В кластере должно быть всего пять нод, одна из них должна быть **Control Plane**-нода.
3. После того как ноды поднимутся, получите список всех нод в вашем локальном кластере.
4. Все команды и вывод результатов выполнения этих команд отправьте ментору на проверку.

```
NAME="CentOS Linux"
VERSION="7 (Core)"
ID="centos"
ID_LIKE="rhel fedora"
VERSION_ID="7"
PRETTY_NAME="CentOS Linux 7 (Core)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:centos:centos:7"
HOME_URL="https://www.centos.org/"
BUG_REPORT_URL="https://bugs.centos.org/"

CENTOS_MANTISBT_PROJECT="CentOS-7"
CENTOS_MANTISBT_PROJECT_VERSION="7"
REDHAT_SUPPORT_PRODUCT="centos"
REDHAT_SUPPORT_PRODUCT_VERSION="7"

[andrey@localhost ~]$ cat /etc/os-release
[andrey@localhost ~]$ █
```

### ----- K8S installation on Centos 7

```
curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
sudo install minikube-linux-amd64 /usr/local/bin/minikube
```

### ----- Docker installation on Centos 7

```
sudo yum install -y yum-utils
sudo yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
sudo yum install docker-ce docker-ce-cli containerd.io docker-compose-plugin -y

sudo service docker status
sudo service docker start
sudo systemctl docker enable
```

### ----- K8S adjustment

```
minikube start
minikube kubectl -- get po -A
```

```

[andrey@localhost ~]$ sudo chmod 777 /var/run/docker.sock
[andrey@localhost ~]$ minikube start
😄 minikube v1.25.2 on Centos 7.9.2009
🌟 Automatically selected the docker driver. Other choices: none, ssh
👍 Starting control plane node minikube in cluster minikube
📦 Pulling base image ...
📦 Downloading Kubernetes v1.23.3 preload ...
> preloaded-images-k8s-v17-v1...: 505.68 MiB / 505.68 MiB 100.00% 3.38 MiB
> gcr.io/k8s-minikube/kicbase: 379.06 MiB / 379.06 MiB 100.00% 2.44 MiB p/
🔥 Creating docker container (CPUs=2, Memory=3900MB) ...
🔄 Preparing Kubernetes v1.23.3 on Docker 20.10.12 ...
  ▪ kubelet.housekeeping-interval=5m
  ▪ Generating certificates and keys ...
  ▪ Booting up control plane ...
  ▪ Configuring RBAC rules ...
🔍 Verifying Kubernetes components...
  ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟 Enabled addons: default-storageclass, storage-provisioner
💡 kubectl not found. If you need it, try: 'minikube kubectl -- get pods -A'
🏡 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
[andrey@localhost ~]$ kubectl get po -A
bash: kubectl: command not found...
[andrey@localhost ~]$ minikube kubectl -- get po -A
> kubectl.sha256: 64 B / 64 B [-----] 100.00% ? p/s 0s
> kubectl: 44.43 MiB / 44.43 MiB [-----] 100.00% 6.08 MiB p/s 7.5s

```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE
kube-system	coredns-64897985d-t46d2	1/1	Running	0	15m
kube-system	etcd-minikube	1/1	Running	0	15m
kube-system	kube-apiserver-minikube	1/1	Running	0	15m
kube-system	kube-controller-manager-minikube	1/1	Running	0	15m
kube-system	kube-proxy-9qc5p	1/1	Running	0	15m
kube-system	kube-scheduler-minikube	1/1	Running	0	15m
kube-system	storage-provisioner	1/1	Running	1 (14m ago)	15m

## Задание D2.4.2

### Описание:

Сообщество **Kubernetes** объявило, что в конце 2021 года **Docker** в качестве среды выполнения контейнеров будет объявлен как устаревший и не будет использоваться в **K8S**-кластере. Но **Kind**, который поднимает **K8S**-кластер на **Docker**, говорит о том, что в отношении поддержки работы кластера **K8S** беспокоиться не стоит.

### Задание:

Почему **Kind** говорит, что это изменение его не затронет?

Попытайтесь почерпнуть эту информацию из открытых источников.  
Все ссылки приведены ниже.

<https://kubernetes.io/blog/2020/12/02/dont-panic-kubernetes-and-docker/>

The screenshot shows a web browser displaying the Kubernetes blog article titled "Don't Panic: Kubernetes and Docker". The browser's address bar shows the URL: [kubernetes.io/blog/2020/12/02/dont-panic-kubernetes-and-docker/](https://kubernetes.io/blog/2020/12/02/dont-panic-kubernetes-and-docker/). The page features the Kubernetes logo and navigation links for "Documentation", "Kubernetes Blog", and "Training". A sidebar on the left contains a search bar and a list of articles from 2020 and 2021. The main content area has a sub-header "Kubernetes it will no longer be supported and you will need to switch to one of the other compliant container runtimes, like containerd or CRI-O. Just make sure that the runtime you choose supports the docker daemon configurations you currently use (e.g. logging)." followed by the article title "So why the confusion and what is everyone freaking out about?". The article text explains that Docker is a popular choice for container runtime, but it is not designed to be embedded inside Kubernetes, which causes confusion. It mentions that Docker is being removed from Kubelet as early as v1.23 release, which removes support for Docker as a container runtime. The article concludes that Docker is being removed from Kubelet as early as v1.23 release, which removes support for Docker as a container runtime.

Потому-что Kubernetes не спроектирован таким образом что имеет внутри себя встроенный Docker.