# Cluster Information

Display and get familiar with the following information:

$ kubectl version  
$ kubectl cluster-info  
$ kubectl get nodes  
$ kubectl describe nodes [nodename]

## Solution

$ kubectl version  
Client Version: version.Info{Major:"1", Minor:"21", GitVersion:"v1.21.1", GitCommit:"5e58841cce77d4bc13713ad2b91fa0d961e69192", GitTreeState:"clean", BuildDate:"2021-05-12T14:18:45Z", GoVersion:"go1.16.4", Compiler:"gc", Platform:"windows/amd64"}  
Server Version: version.Info{Major:"1", Minor:"20", GitVersion:"v1.20.2", GitCommit:"faecb196815e248d3ecfb03c680a4507229c2a56", GitTreeState:"clean", BuildDate:"2021-01-13T13:20:00Z", GoVersion:"go1.15.5", Compiler:"gc", Platform:"linux/amd64"}  
  
$ kubectl cluster-info  
Kubernetes control plane is running at https://127.0.0.1:55318  
KubeDNS is running at https://127.0.0.1:55318/api/v1/namespaces/kube-system/services/kube-dns:dns/proxy  
  
To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.  
  
$ kubectl get nodes  
NAME STATUS ROLES AGE VERSION  
minikube Ready control-plane,master 18h v1.20.2  
  
$ kubectl describe nodes minikube  
Name: minikube  
Roles: control-plane,master  
Labels: beta.kubernetes.io/arch=amd64  
 beta.kubernetes.io/os=linux  
 kubernetes.io/arch=amd64  
 kubernetes.io/hostname=minikube  
 kubernetes.io/os=linux  
 minikube.k8s.io/commit=c61663e942ec43b20e8e70839dcca52e44cd85ae  
 minikube.k8s.io/name=minikube  
 minikube.k8s.io/updated\_at=2021\_06\_10T15\_59\_07\_0700  
 minikube.k8s.io/version=v1.20.0  
 node-role.kubernetes.io/control-plane=  
 node-role.kubernetes.io/master=  
Annotations: kubeadm.alpha.kubernetes.io/cri-socket: /var/run/dockershim.sock  
 node.alpha.kubernetes.io/ttl: 0  
 volumes.kubernetes.io/controller-managed-attach-detach: true  
CreationTimestamp: Thu, 10 Jun 2021 15:59:02 +0300  
Taints: <none>  
Unschedulable: false  
Lease:  
 HolderIdentity: minikube  
 AcquireTime: <unset>  
 RenewTime: Fri, 11 Jun 2021 10:10:50 +0300  
Conditions:  
 Type Status LastHeartbeatTime LastTransitionTime Reason Message  
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 MemoryPressure False Fri, 11 Jun 2021 10:10:50 +0300 Thu, 10 Jun 2021 15:58:57 +0300 KubeletHasSufficientMemory kubelet has sufficient memory available  
 DiskPressure False Fri, 11 Jun 2021 10:10:50 +0300 Thu, 10 Jun 2021 15:58:57 +0300 KubeletHasNoDiskPressure kubelet has no disk pressure  
 PIDPressure False Fri, 11 Jun 2021 10:10:50 +0300 Thu, 10 Jun 2021 15:58:57 +0300 KubeletHasSufficientPID kubelet has sufficient PID available  
 Ready True Fri, 11 Jun 2021 10:10:50 +0300 Thu, 10 Jun 2021 15:59:19 +0300 KubeletReady kubelet is posting ready status  
Addresses:  
 InternalIP: 192.168.49.2  
 Hostname: minikube  
Capacity:  
 cpu: 8  
 ephemeral-storage: 263174212Ki  
 hugepages-2Mi: 0  
 memory: 26174408Ki  
 pods: 110  
Allocatable:  
 cpu: 8  
 ephemeral-storage: 263174212Ki  
 hugepages-2Mi: 0  
 memory: 26174408Ki  
 pods: 110  
System Info:  
 Machine ID: 822f5ed6656e44929f6c2cc5d6881453  
 System UUID: 822f5ed6656e44929f6c2cc5d6881453  
 Boot ID: 1e2b3b38-b716-43e1-b53b-83efa07bedfd  
 Kernel Version: 5.4.72-microsoft-standard-WSL2  
 OS Image: Ubuntu 20.04.2 LTS  
 Operating System: linux  
 Architecture: amd64  
 Container Runtime Version: docker://20.10.6  
 Kubelet Version: v1.20.2  
 Kube-Proxy Version: v1.20.2  
PodCIDR: 10.244.0.0/24  
PodCIDRs: 10.244.0.0/24  
Non-terminated Pods: (8 in total)  
 Namespace Name CPU Requests CPU Limits Memory Requests Memory Limits Age  
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 kube-system coredns-74ff55c5b-nmnnx 100m (1%) 0 (0%) 70Mi (0%) 170Mi (0%) 18h  
 kube-system etcd-minikube 100m (1%) 0 (0%) 100Mi (0%) 0 (0%) 18h  
 kube-system kube-apiserver-minikube 250m (3%) 0 (0%) 0 (0%) 0 (0%) 18h  
 kube-system kube-controller-manager-minikube 200m (2%) 0 (0%) 0 (0%) 0 (0%) 18h  
 kube-system kube-proxy-hlg7f 0 (0%) 0 (0%) 0 (0%) 0 (0%) 18h  
 kube-system kube-scheduler-minikube 100m (1%) 0 (0%) 0 (0%) 0 (0%) 18h  
 kube-system metrics-server-7894db45f8-lv7jq 100m (1%) 0 (0%) 300Mi (1%) 0 (0%) 18h  
 kube-system storage-provisioner 0 (0%) 0 (0%) 0 (0%) 0 (0%) 18h  
Allocated resources:  
 (Total limits may be over 100 percent, i.e., overcommitted.)  
 Resource Requests Limits  
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 cpu 850m (10%) 0 (0%)  
 memory 470Mi (1%) 170Mi (0%)  
 ephemeral-storage 100Mi (0%) 0 (0%)  
 hugepages-2Mi 0 (0%) 0 (0%)  
Events:  
 Type Reason Age From Message  
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 Normal Starting 55m kubelet Starting kubelet.  
 Normal NodeAllocatableEnforced 55m kubelet Updated Node Allocatable limit across pods  
 Normal NodeHasSufficientMemory 55m (x8 over 55m) kubelet Node minikube status is now: NodeHasSufficientMemory  
 Normal NodeHasNoDiskPressure 55m (x8 over 55m) kubelet Node minikube status is now: NodeHasNoDiskPressure  
 Normal NodeHasSufficientPID 55m (x7 over 55m) kubelet Node minikube status is now: NodeHasSufficientPID  
 Normal Starting 55m kube-proxy Starting kube-proxy.