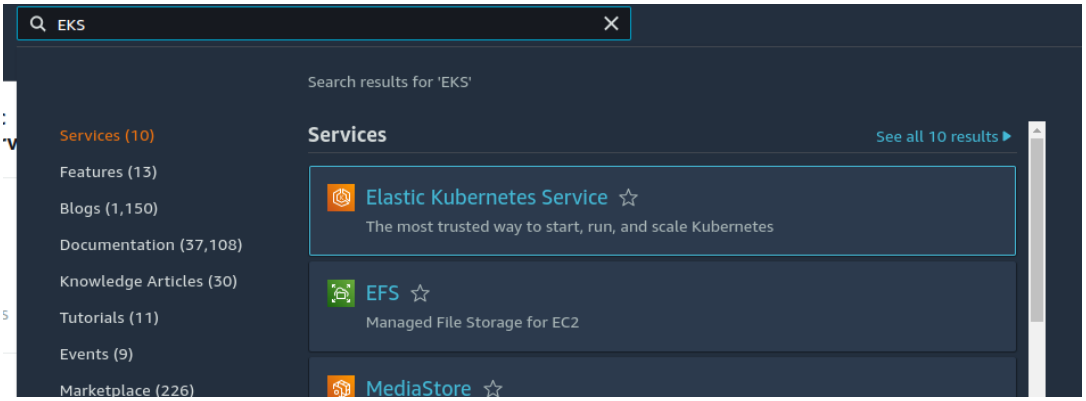
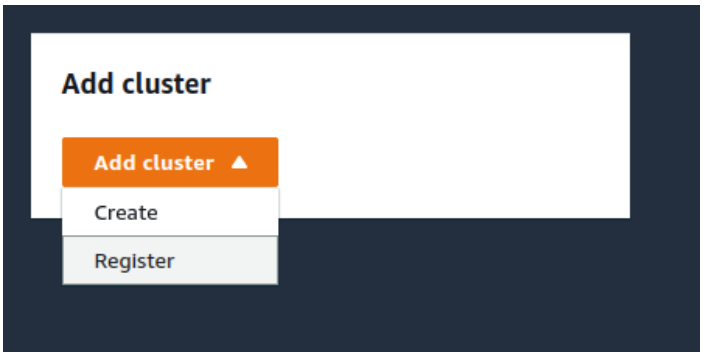
Creación y configuración de un Cluster EKS

Crear Cluster EKS

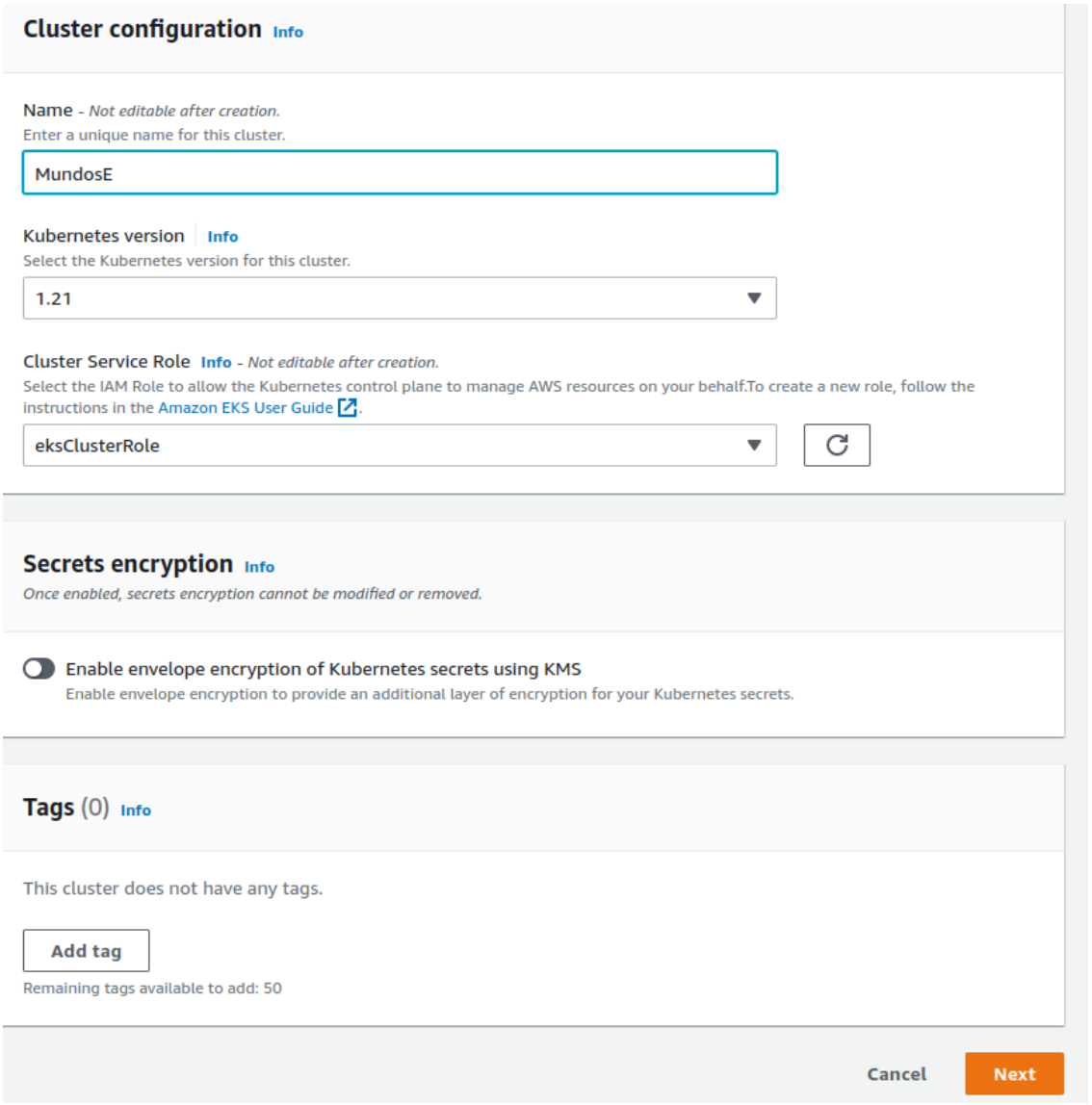
1. Dirigirse a la página principal de EKS



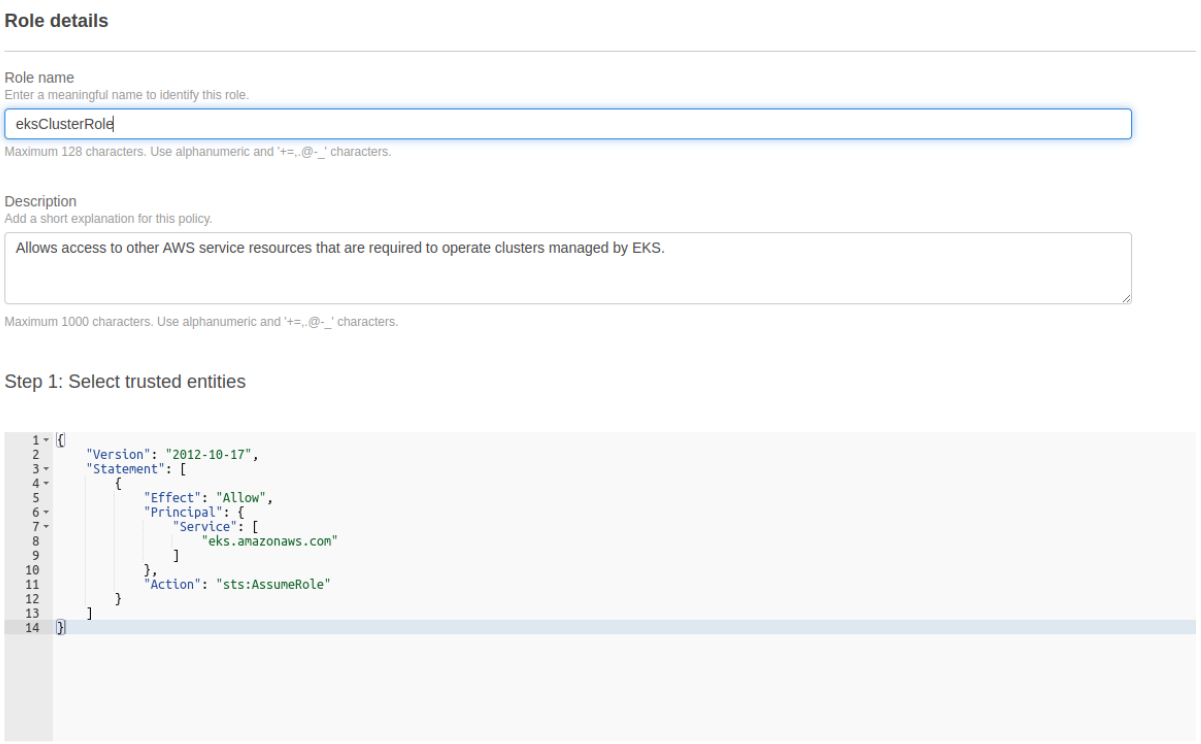
2. Seleccionar crear nuevo cluster:



3. Completar los campos del formulario de creación:



4. En caso de no disponer de Cluster Service Role, crearlo siguiendo este Link: https://docs.aws.amazon.com/eks/latest/userguide/service_IAM_role.html#create-service-role



5. En caso de querer crear un cluster con especificaciones diferentes a las por defecto con respecto a la red, seleccionar los valores que se necesiten. Si no, dejar los valores por defecto:

Networking Info

These properties cannot be changed after the cluster is created.

VPC Info

Select a VPC to use for your EKS Cluster resources.To create a new VPC, go to the VPC console.

vpc-67797c02 | Default

Subnets Info

Choose the subnets in your VPC where the control plane may place elastic network interfaces (ENIs) to facilitate communication with your cluster.To create a new subnet, go to the corresponding page in the VPC console.

Select subnets

subnet-08cc7204 ✕ subnet-4e70e365 ✕ subnet-57a5f120 ✕

subnet-6ff99036 ✕ subnet-2bfc684e ✕ subnet-70393f4a ✕

Security groups Info

Choose the security groups to apply to the EKS-managed Elastic Network Interfaces that are created in your worker node subnets.To create a new security group, go to the corresponding page in the VPC console.

Select security groups

Choose cluster IP address family Info

Specify the IP address type for pods and services in your cluster.

- (•) IPv4
- ( ) IPv6

Configure Kubernetes Service IP address range Info

Specify the range from which cluster services will receive IP addresses.

Cluster endpoint access Info

Configure access to the Kubernetes API server endpoint.

- (•) **Public**
  The cluster endpoint is accessible from outside of your VPC. Worker node traffic will leave your VPC to connect to the endpoint.
- ( ) **Public and private**
  The cluster endpoint is accessible from outside of your VPC. Worker node traffic to the endpoint will stay within your VPC.
- ( ) **Private**
  The cluster endpoint is only accessible through your VPC. Worker node traffic to the endpoint will stay within your VPC.

▶ **Advanced Settings**

Networking add-ons

Configure add-ons that provide advanced networking functionalities on the cluster.

Amazon VPC CNI Info

Enable pod networking within your cluster.

Version

Select the version for this add-on.

v1.10.1-eksbuild.1

ⓘ This add-on will use the IAM role of the node where it runs. You can change this add-on to use IAM Roles for Service Accounts after cluster creation.

CoreDNS Info

Enable service discovery within your cluster.

Version

Select the version for this add-on.

v1.8.4-eksbuild.1

kube-proxy Info

Enable service networking within your cluster.

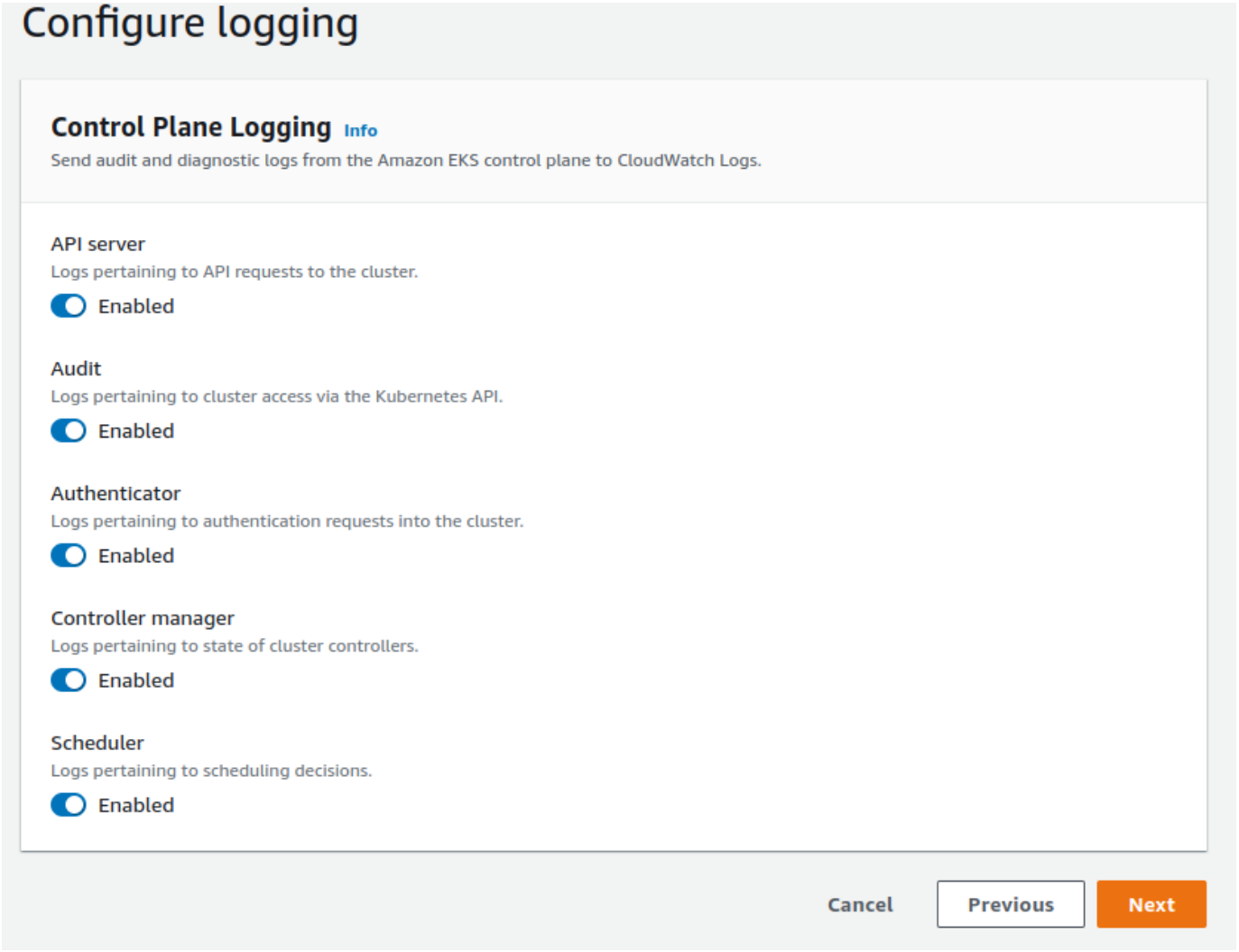
Version

Select the version for this add-on.

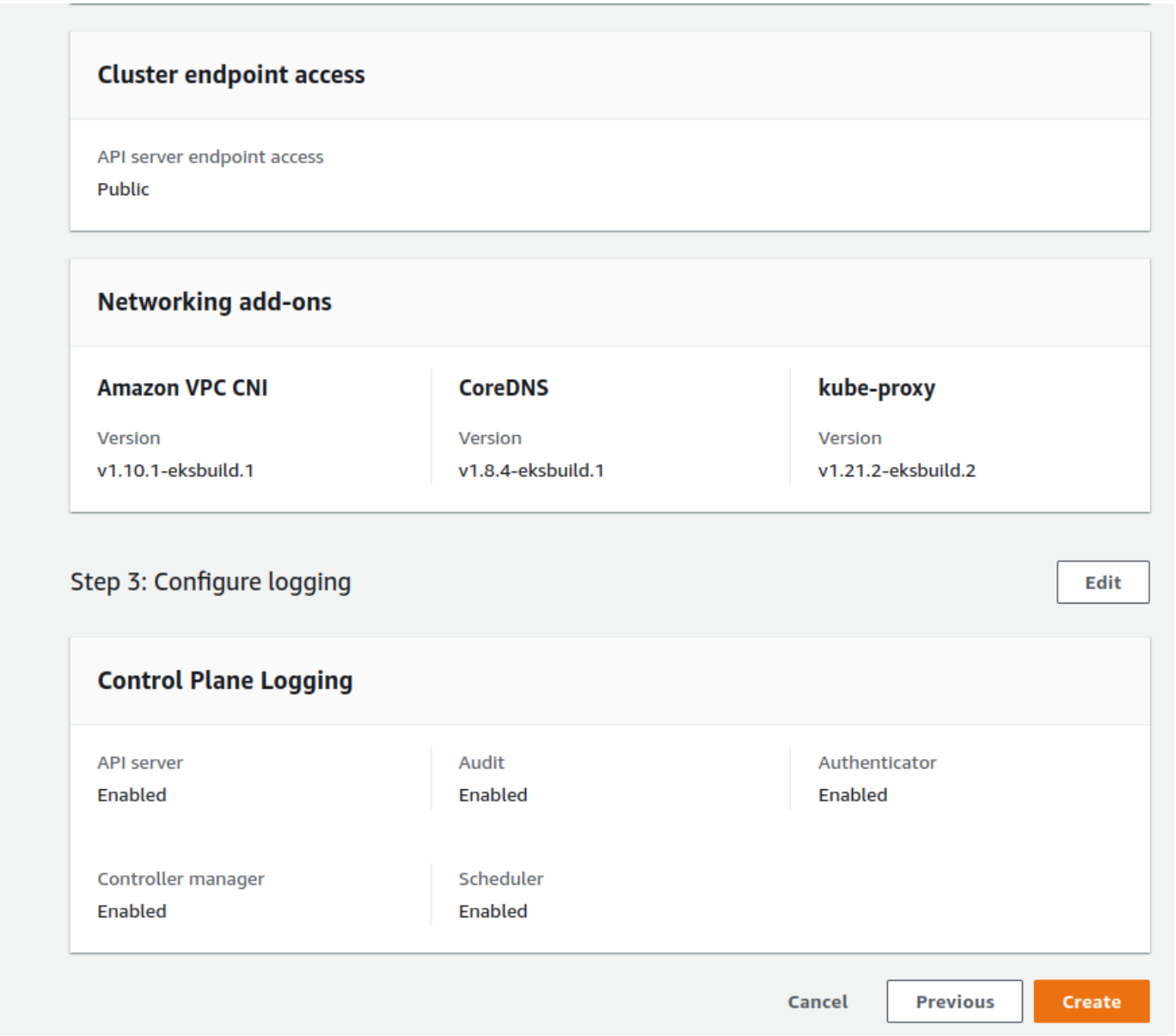
v1.21.2-eksbuild.2

Cancel | Previous | Next

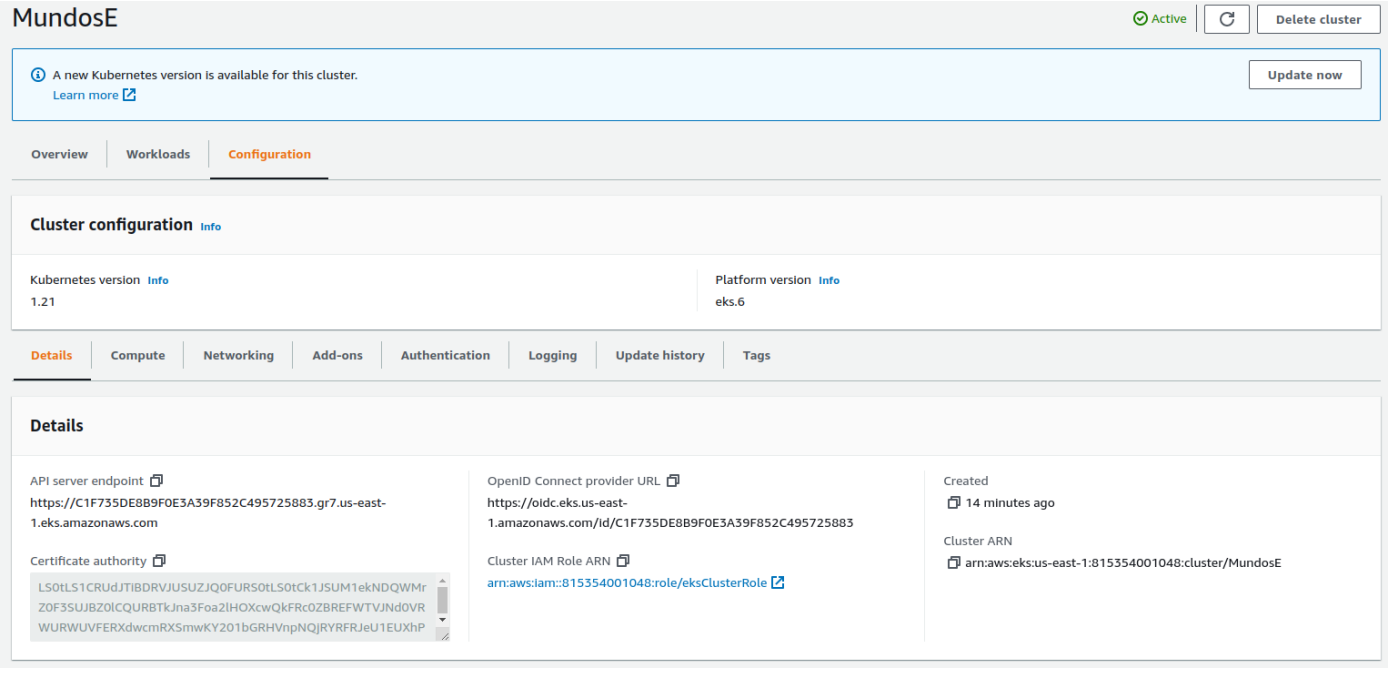
6. Seleccionar las opciones de logging para el control plane:



7. Revisar si la configuración está bien y crear el cluster en caso afirmativo:

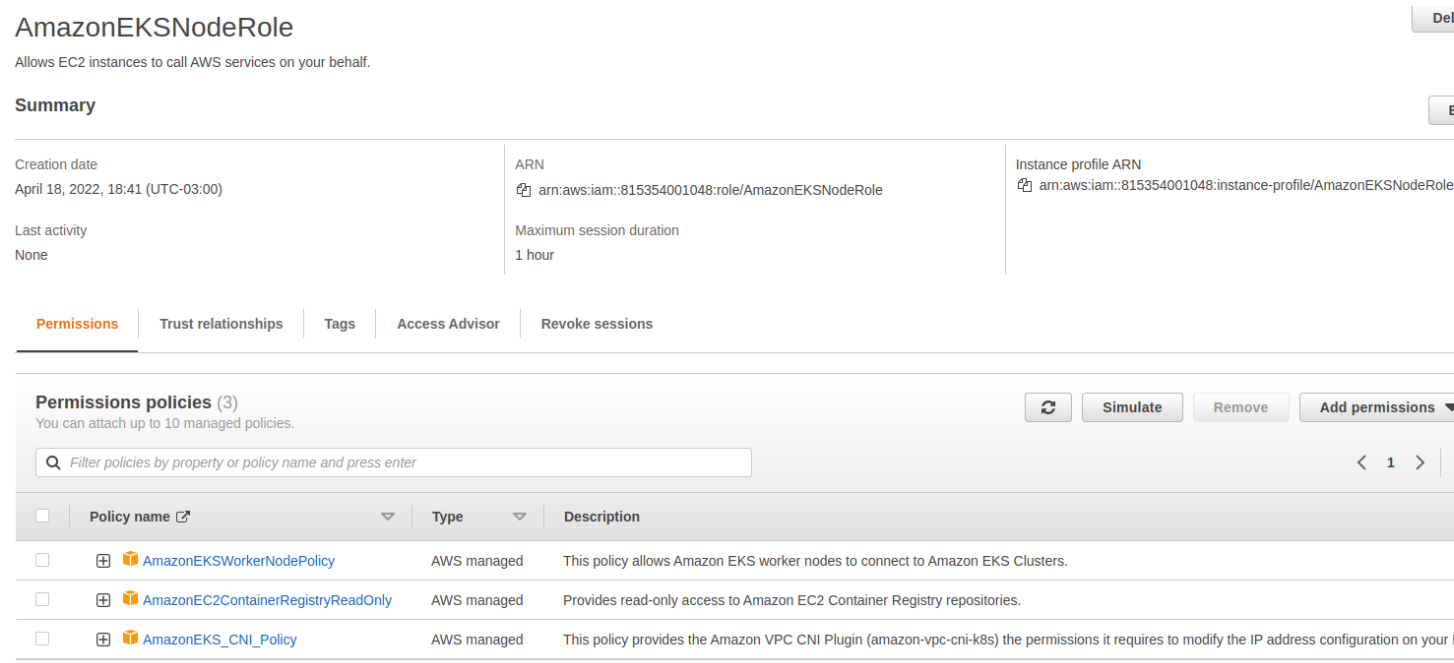


8. Revisar que todo se haya creado de forma correcta:

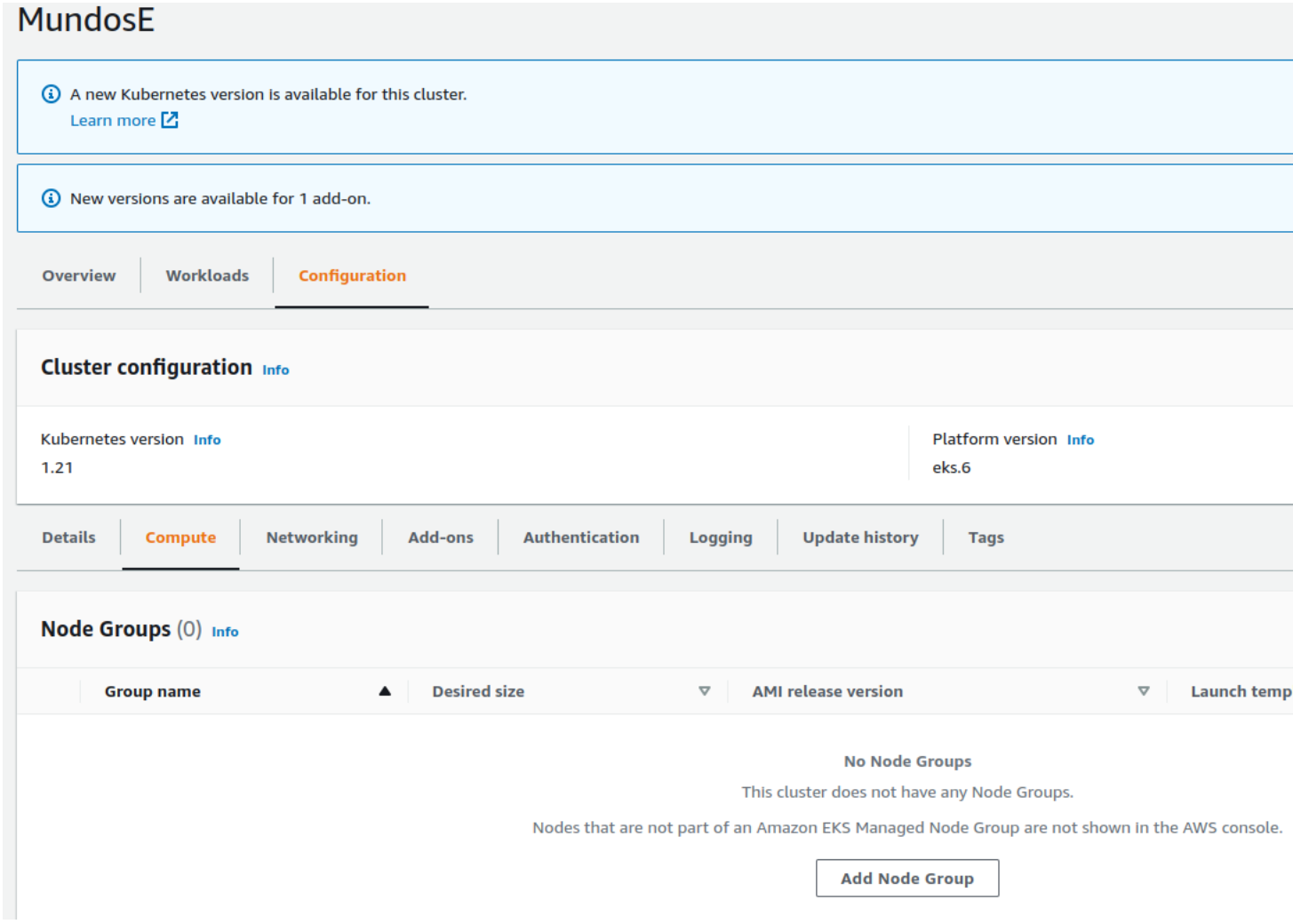


Creación de Node Group

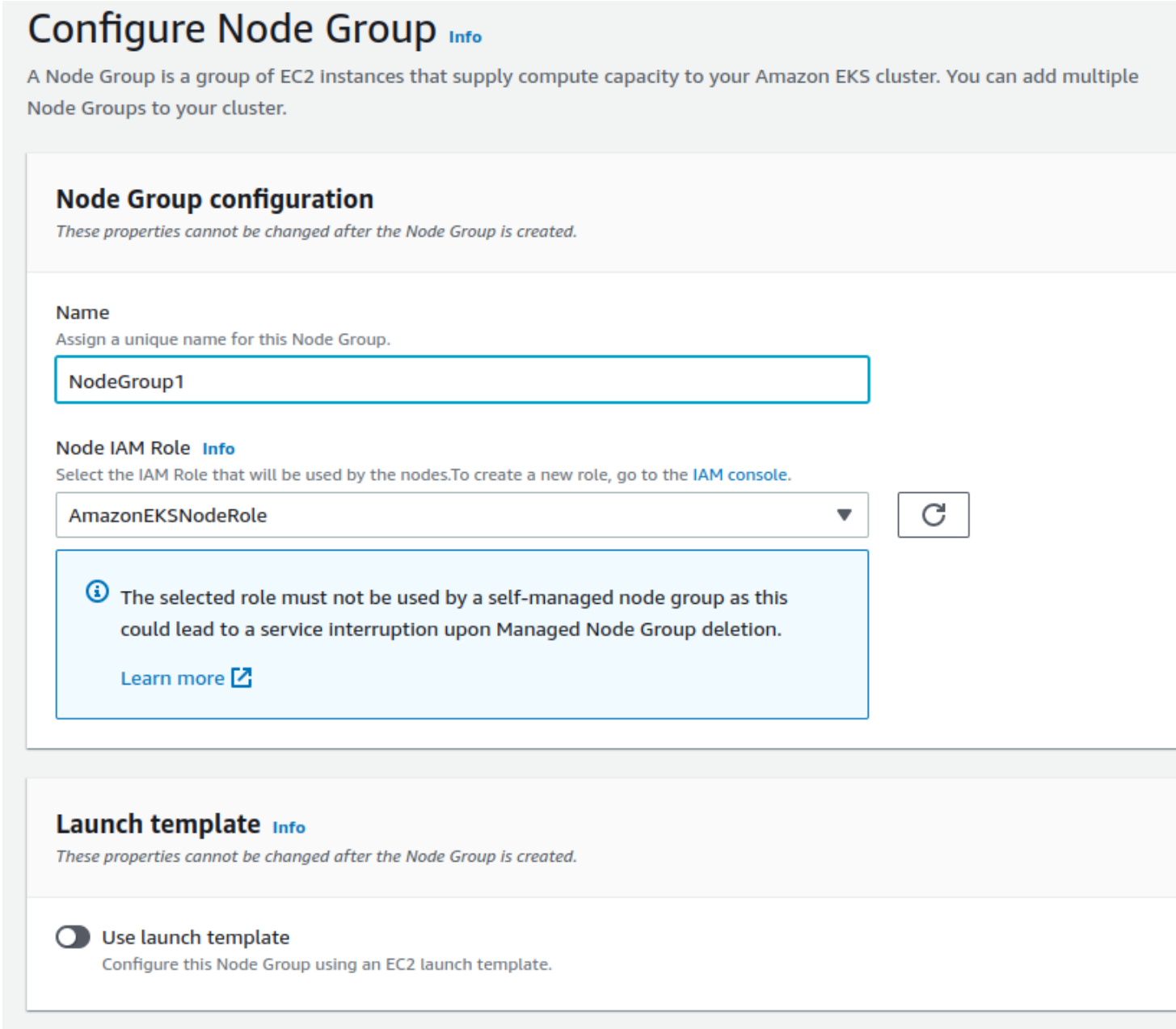
1. Crear un IAM Role para los worker nodes (https://docs.aws.amazon.com/es_es/eks/latest/userguide/create-node-role.html):



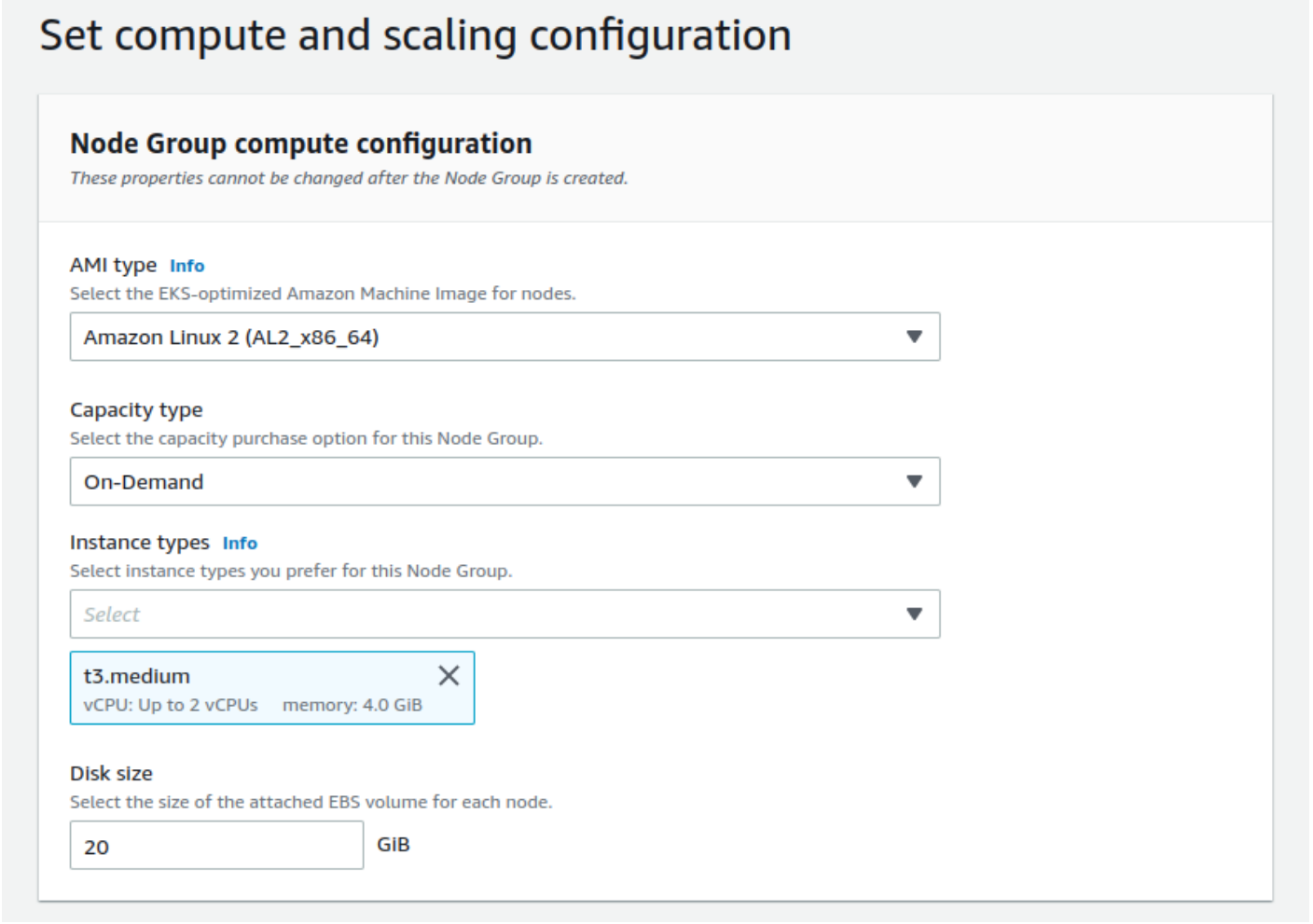
2. Seleccionar la pestaña “Compute” y presionar en “Add Node Group”



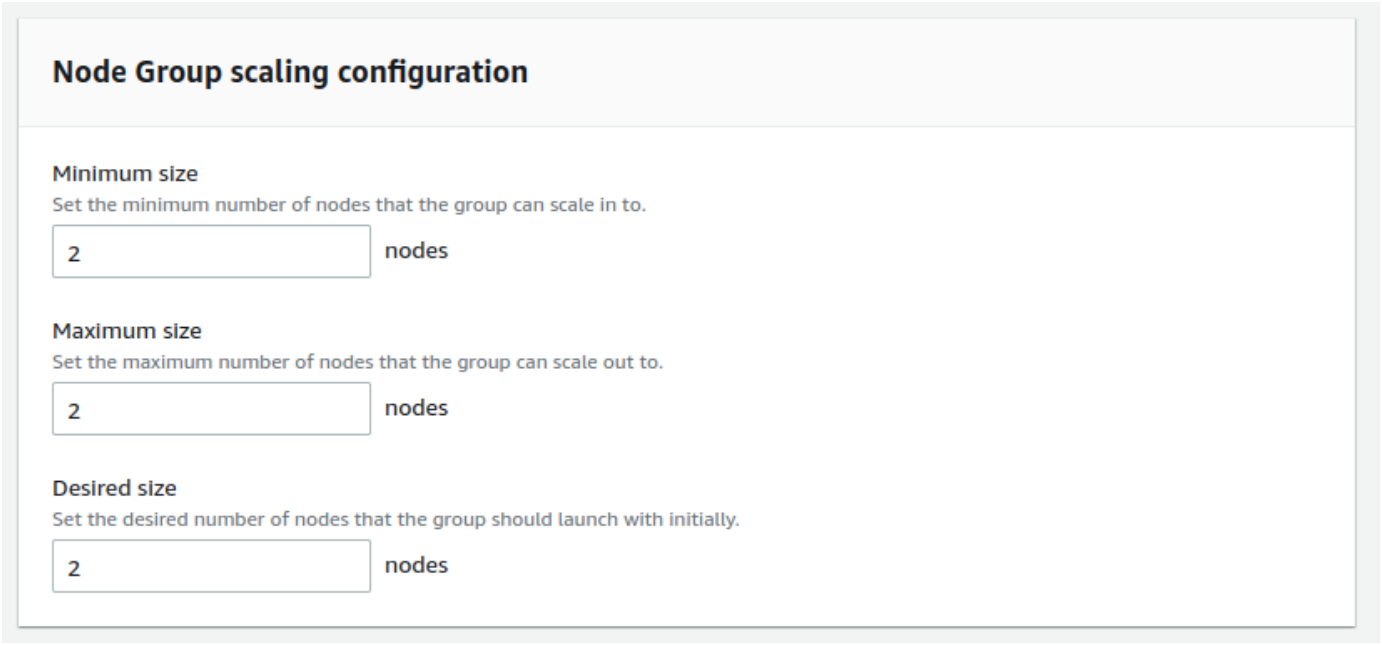
3. Completar el formulario de creación de Node Group, seleccionando el role creado anteriormente:



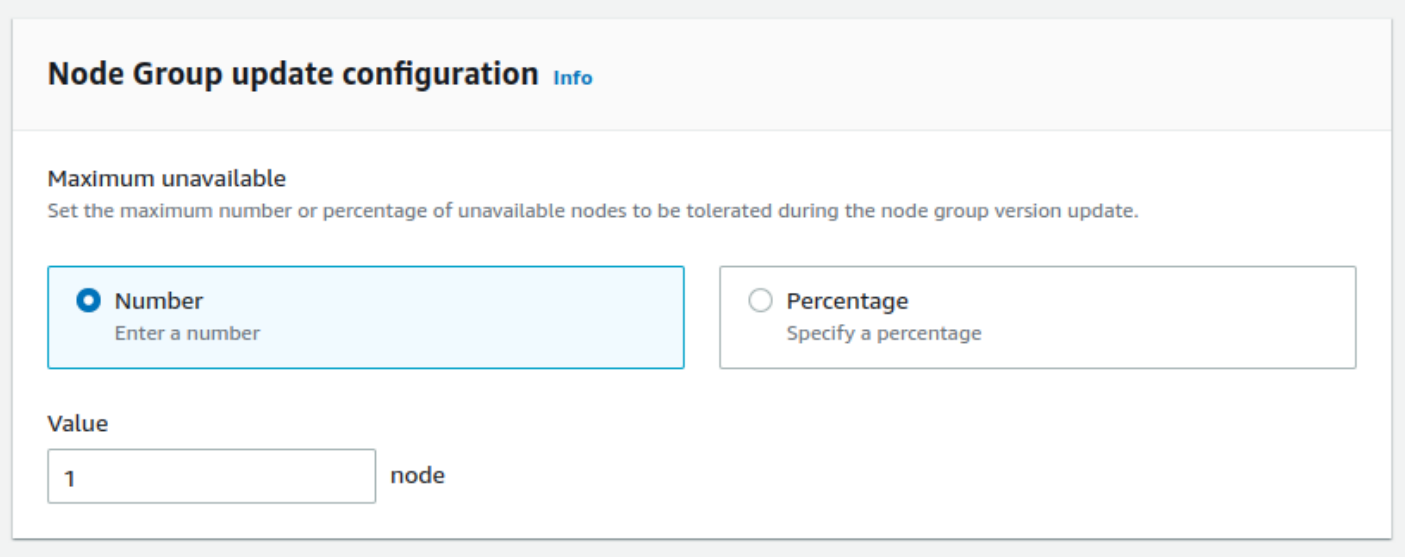
4. Seleccionar la capacidad de cómputo:



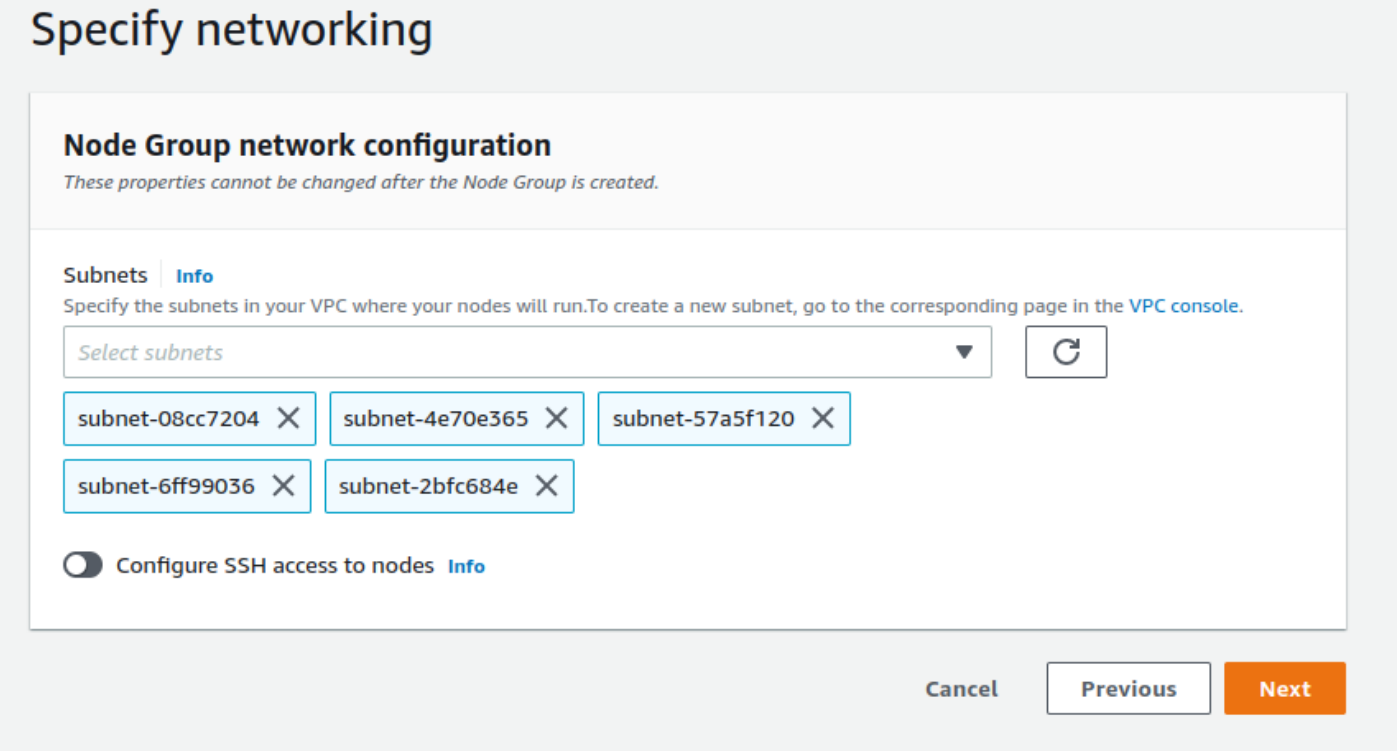
5. Elegir el comportamiento de “autoscaling”:



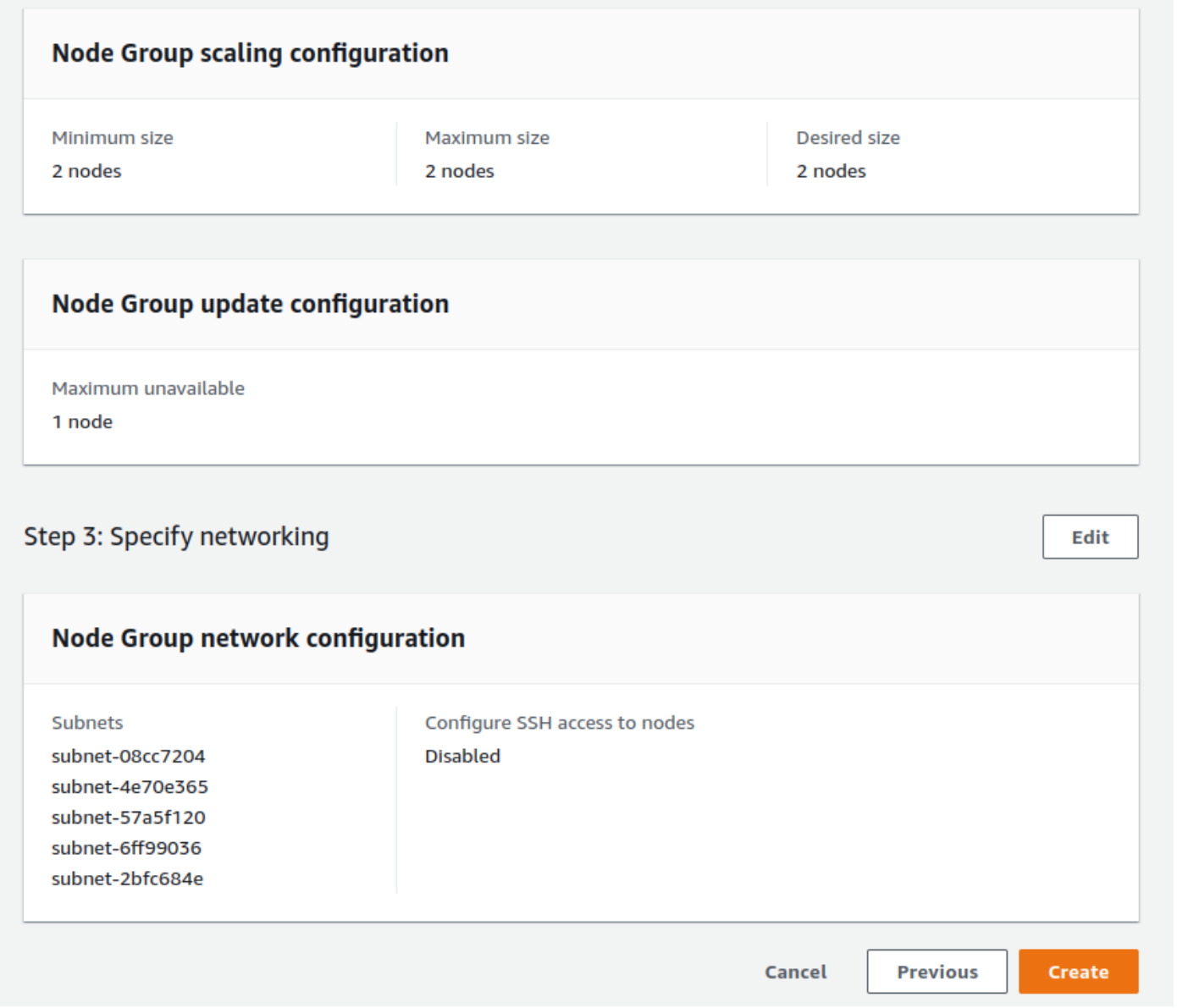
6. Optar por alguna combinación de opciones para cuando se necesite actualizar los node groups y presionar en “Next”:



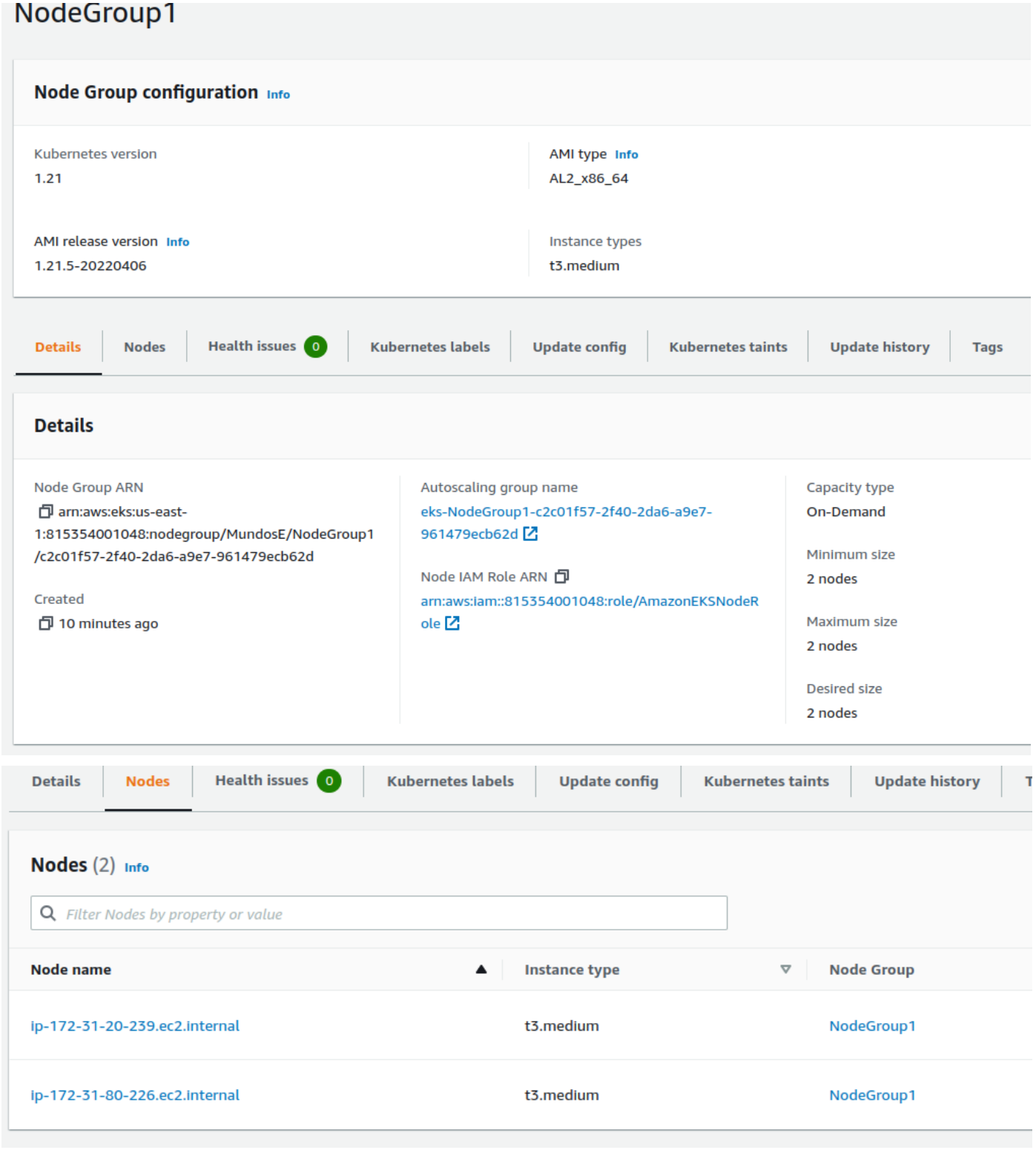
7. Seleccionar las opciones de red y presionar “Next”:



8. Revisar que las opciones esten correctas y crear el node group:



9. Revisar que el nodo haya sido creado de manera correcta:



Configuración de Kubectl

1. Configurar las credenciales de AWS, ya sea por medio de los profiles o con variables de entorno.
2. Correr el siguiente comando para crea el ~/.kube/config file
   ```
   # aws eks update-kubeconfig --name NOMBRE_DEL_CLUSTER
   ```
3. Probar si se puede utilizar de manera correcta el comando kubectl
   ```
   # kubectl get nodes
   ```