



DECKHOUSE

**Kubernetes
Platform**

L2 LoadBalancer Basics

L2 LoadBalancer



There are three frontends nodes and one worker in the cluster.

L2 LoadBalancer



```
apiVersion: deckhouse.io/v1alpha1
kind: ModuleConfig
metadata:
  name: l2-load-balancer
spec:
  enabled: true
  version: 1
```



We turn on **MetalLB** module: ModuleConfig version 2.

L2 LoadBalancer



```
apiVersion: network.deckhouse.io/v1alpha1
kind: MetalLoadBalancerClass
metadata:
  name: front
spec:
  addressPool:
    - 192.168.122.100-192.168.122.150
  isDefault: false
  nodeSelector:
    node-role: front
  type: L2
```



An **MetalLoadBalancerClass** resource has been created specifying front-end nodes and a pool of "public" IP addresses. This allows for easily creating "zones" by associating specific address pools with a group of nodes. Speakers are run on all front-end nodes.

L2 LoadBalancer



```
apiVersion: v1
kind: Service
metadata:
  name: nginx-deployment
  annotations:
    network.deckhouse.io/l2-load-balancer-name: ingress
    network.deckhouse.io/l2-load-balancer-external-ips-count: "3"
spec:
  ports:
    - port: 80
      protocol: TCP
      targetPort: 80
  selector:
    app: nginx
  type: LoadBalancer
  LoadBalancerClass: front
```

front-0

node-role: front

speaker

192.168.122.100



nginx-0

front-1

node-role: front

speaker

192.168.122.101



nginx-1

front-2

node-role: front

speaker

192.168.122.102



nginx-2

worker-0



app-foo

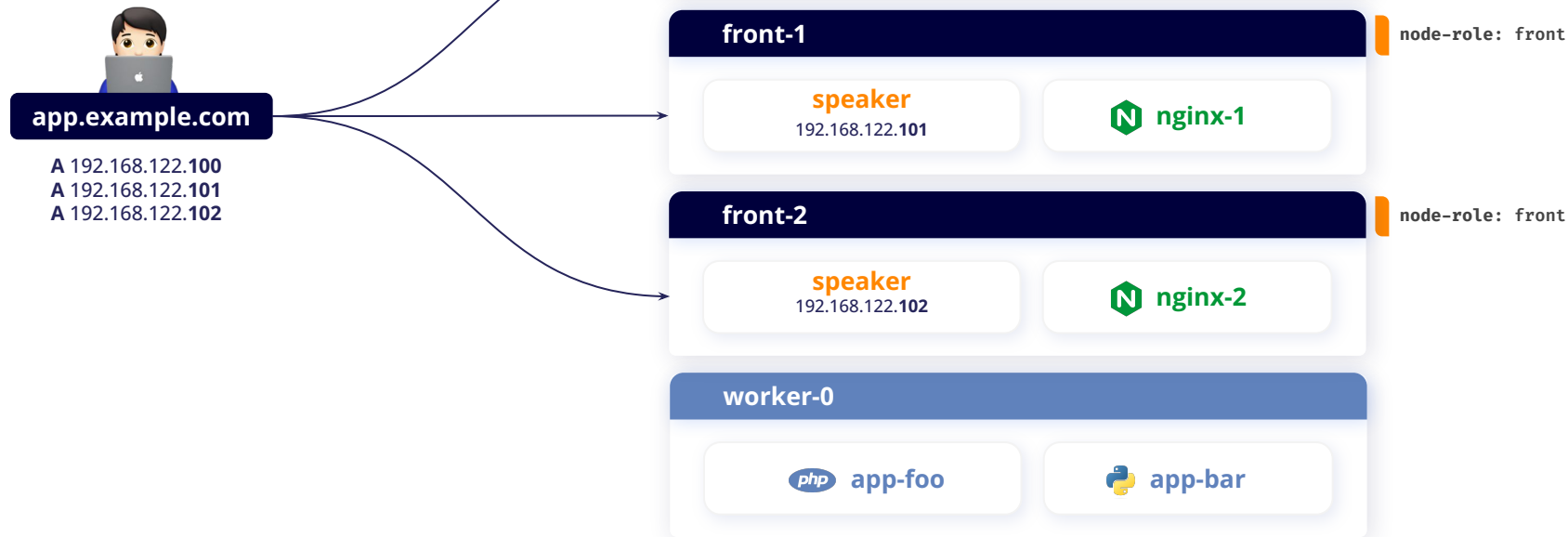


app-bar

An **Service** resource with type **LoadBalancer** has been created. It contains the **LoadBalancerClass** name, special annotation with the required number of IP addresses.

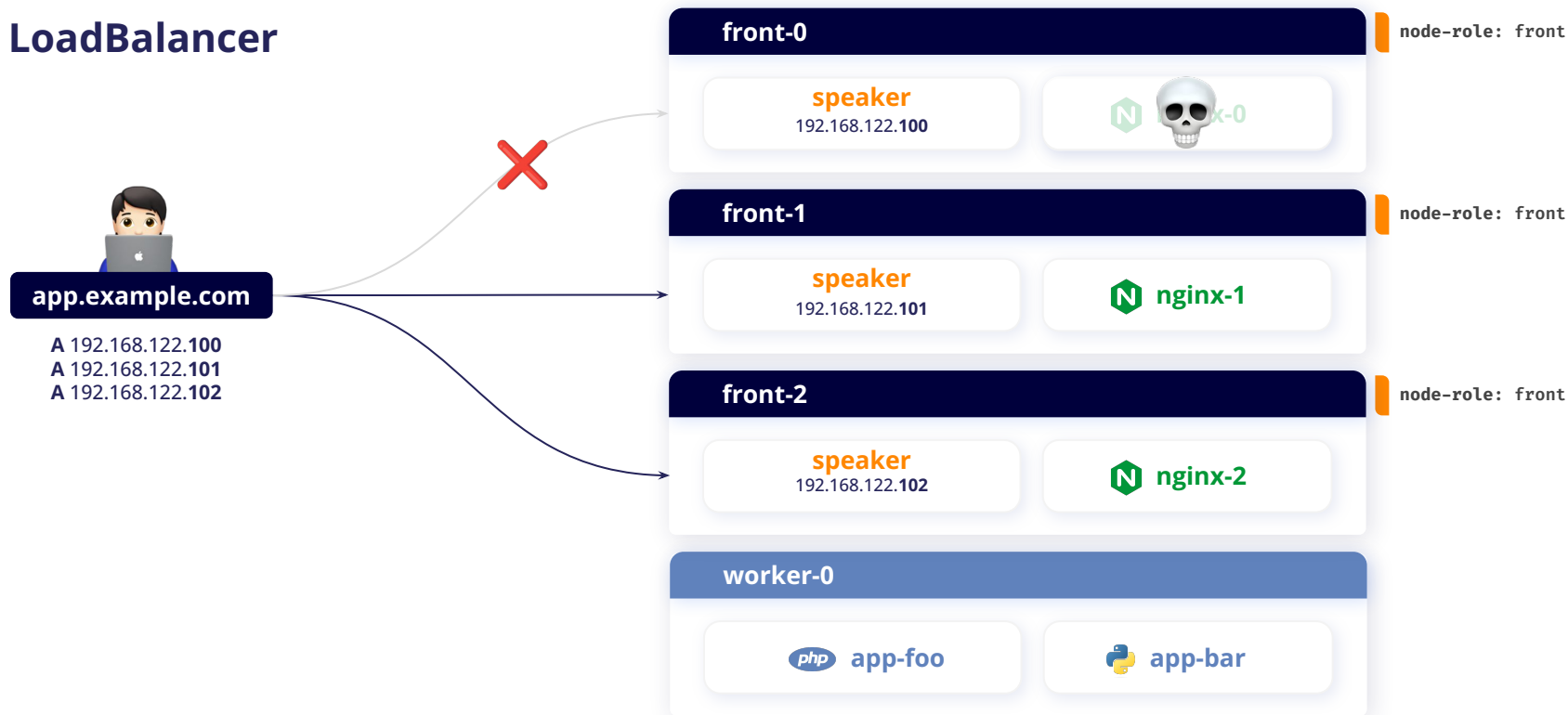
Speakers are launched on all frontend nodes, each obtaining one or more addresses from the pool.

L2 LoadBalancer



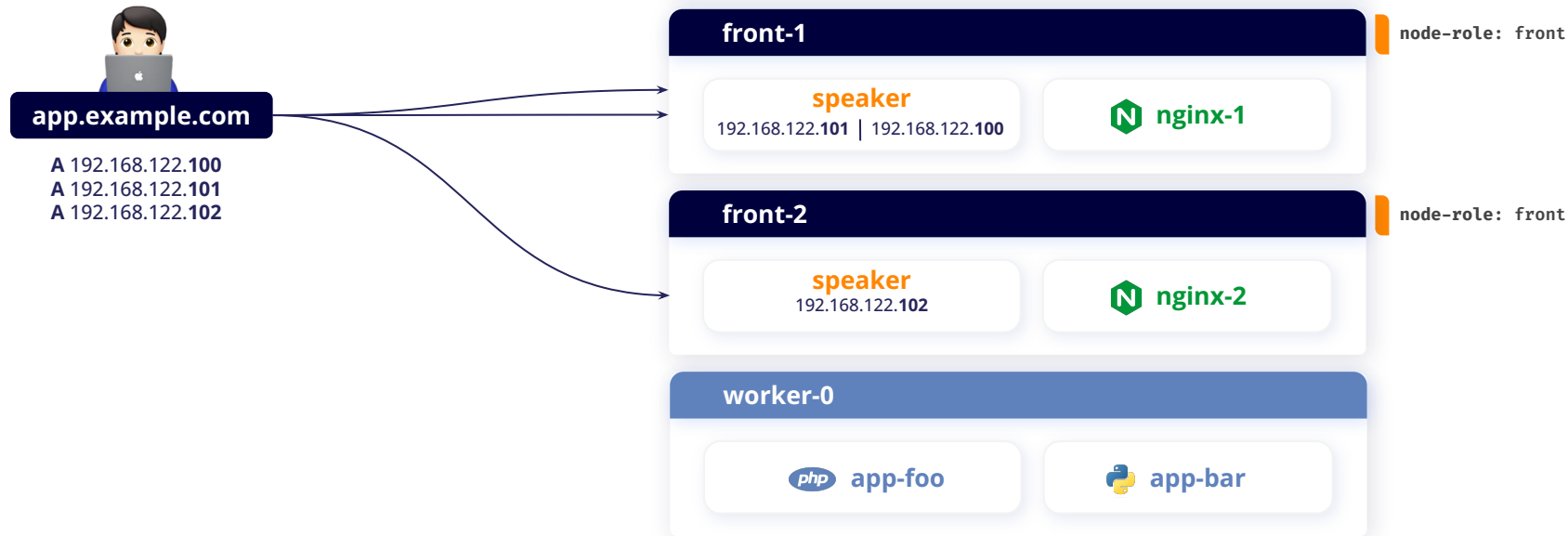
Each front-end node participates in handling application requests.
For this, three A records are specified in the public DNS name of the application.

L2 LoadBalancer



In the event of a failure of the nginx application on one of the front-end nodes or the node itself, a third of the requests will fail,...

L2 LoadBalancer



...and one of the remaining front-end nodes will take over the "problematic" IP address and handle the incoming application requests.