

Kubernetes Cluster

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박용진

K8s Cluster

```
[root@master nginx-13.2.13 (kubernetes-admin@kubernetes:vote)]#systemctl status -l kubelet
kubelet.service - kubelet: The Kubernetes Node Agent
Loaded: loaded (/usr/lib/systemd/system/kubelet.service; enabled; vendor preset: disabled)
Drop-In: /usr/lib/systemd/system/kubelet.service.d
└─10-kubeadm.conf
Active: active (running) since Thu 2023-03-23 10:52:31 KST; 5h 0min ago
Docs: https://kubernetes.io/docs/
Main PID: 44217 (kubelet)
Tasks: 11 (limit: 12169)
Memory: 91.4M
CPU: 4min 12.725s
CGroup: /system.slice/kubelet.service
└─44217 /usr/bin/kubelet --bootstrap-kubeconfig=/etc/kubernetes/bootstrap-kubelet.conf --kubeconfig=/etc/kubernetes/kubelet.conf --conf
```

```
[root@master ~ (kubernetes-admin@kubernetes:traefik)]#kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
master	Ready	control-plane	4h22m	v1.26.3
worker1	Ready	<none>	4h20m	v1.26.3
worker2	Ready	<none>	4h20m	v1.26.3

Kubectl Host, Clustering Status

K8s Cluster

```
[root@master ~ (kubernetes-admin@kubernetes:vote)]#systemctl status containerd
containerd.service - containerd container runtime
Loaded: loaded (/usr/lib/systemd/system/containerd.service; enabled; vendor preset: disabled)
Active: active (running) since Fri 2023-03-24 12:07:55 KST; 47s ago
Docs: https://containerd.io
Process: 866 ExecStartPre=/sbin/modprobe overlay (code=exited, status=0/SUCCESS)
Main PID: 866 (containerd)
Tasks: 164
Memory: 182.0M
CPU: 3.350s
CGroup: /system.slice/containerd.service
└─ 866 /usr/bin/containerd
   └─ 978 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id f095784ba2064023a012b2c97ec905b4553dc6d67f7d14ad91e128a15048f7f4 -address
      └─ 979 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id c0e00d87396f0081d2c403e2db3e59c33df91b46e42549a70212ca2624a70d80 -address
         └─ 993 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 49c4a20d9e40d592bf81e5f0214d86c3fce0d0068c68ab99c2a47ba99b9688e7 -address
            └─ 1018 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id baa0460da6fc78039af3008463fc1cd66fdd26752a5d46607ac65c542678eb18 -address
               └─ 1290 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id b669a0935715f3d0e6ff90b5db713cc138bc99ff6f88d9dd8f389aebca5cc8fb3 -address
                  └─ 1389 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id bb4c60cd5b0afadf40f8b9c0261f05681d2a3406cd467f9489c56cc15dc36850 -address
                     └─ 1487 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 44d0dd/c083402cb85cc040f21e38/4de148acacecdcae354e02a92fd3/a1ba -address
                        └─ 1623 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 86057924f695c4c6e98f7c5ac2aae52d3d155a8cd1928f7816669571fdd1d235 -address
                           └─ 2144 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 8d99f095ee2b/ea43aa0d120f05fe0cbe895efdb48dd9a2c0d195f4ec66960c -address
                              └─ 2259 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 695da5b4214c36769e034b615903d10534320729351e78e2bd76e08046229a8a -address
                                 └─ 2308 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id dfc549f3651ed95807bd25d039d8850ec463af167d40e0541786c644471b45a6 -address
                                    └─ 2566 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 9ae80598acacfcdd63004349d881d1300ffad37a8be5f5a882565381f714649c9 -address
                                       └─ 3051 /usr/bin/containerd-shim-runc-v2 -namespace k8s.io -id 17362f1e2d8ea4fc164477fd162fb2eb80eb16cf9ee81b3cc2884a6427ebd670 -address
```

Containerd Status

K8s Service

```
[root@master nginx-13.2.13 (kubernetes-admin@kubernetes:nginx)]# kubectl get pods
```

NAME	READY	STATUS	RESTARTS	AGE	IP	NODE	NOMINATED	NODE	READINESS	GATES
nginx-55c94d8fb5-7jzq8	1/1	Running	0	90m	172.31.189.68	worker2	<none>		<none>	
nginx-55c94d8fb5-m5djc	1/1	Running	0	90m	172.31.235.133	worker1	<none>		<none>	
nginx-55c94d8fb5-mkfwg	1/1	Running	0	37s	172.31.219.69	master	<none>		<none>	

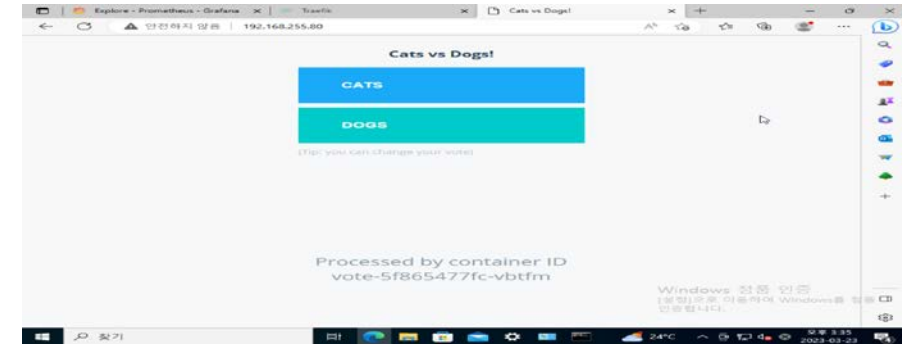
nginx	nginx-55c94d8fb5-7jzq8	1/1	Running	0	92m
nginx	nginx-55c94d8fb5-m5djc	1/1	Running	0	92m
nginx	nginx-55c94d8fb5-mkfwg	1/1	Running	0	2m19s

Nginx Service and 3 Pods

K8s Service

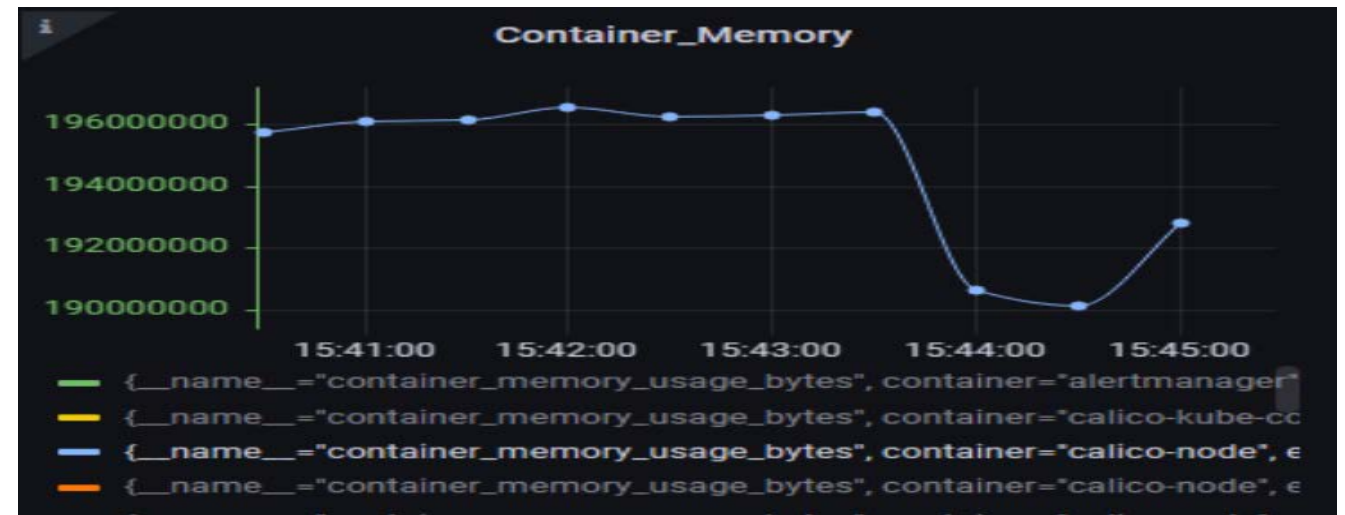
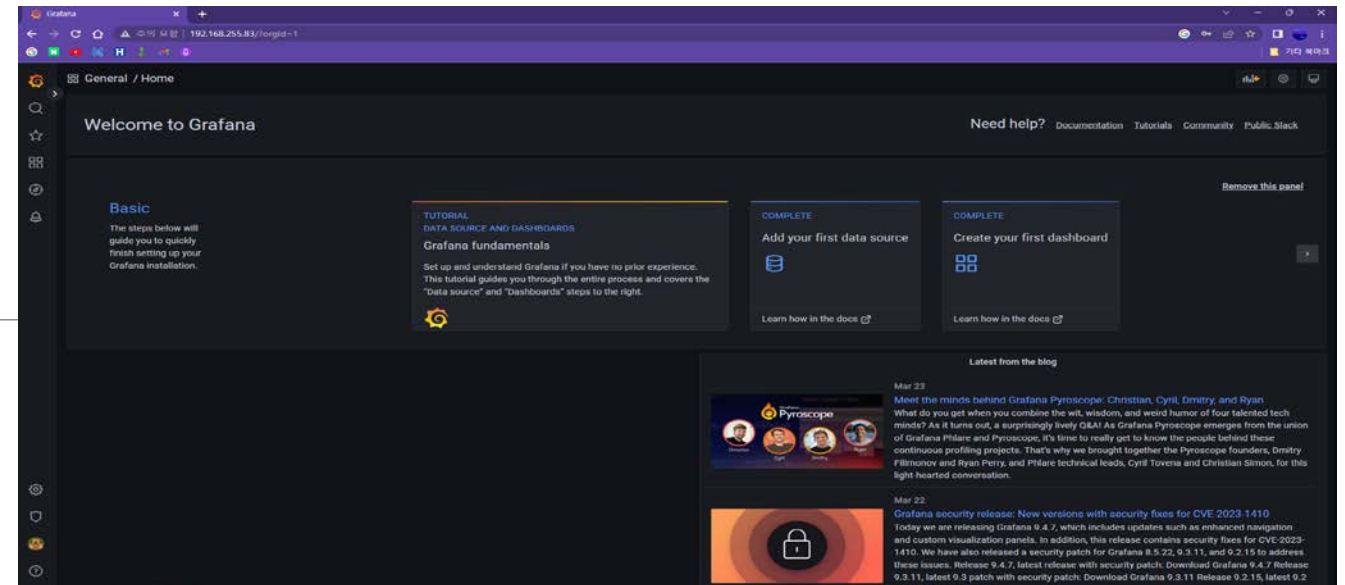
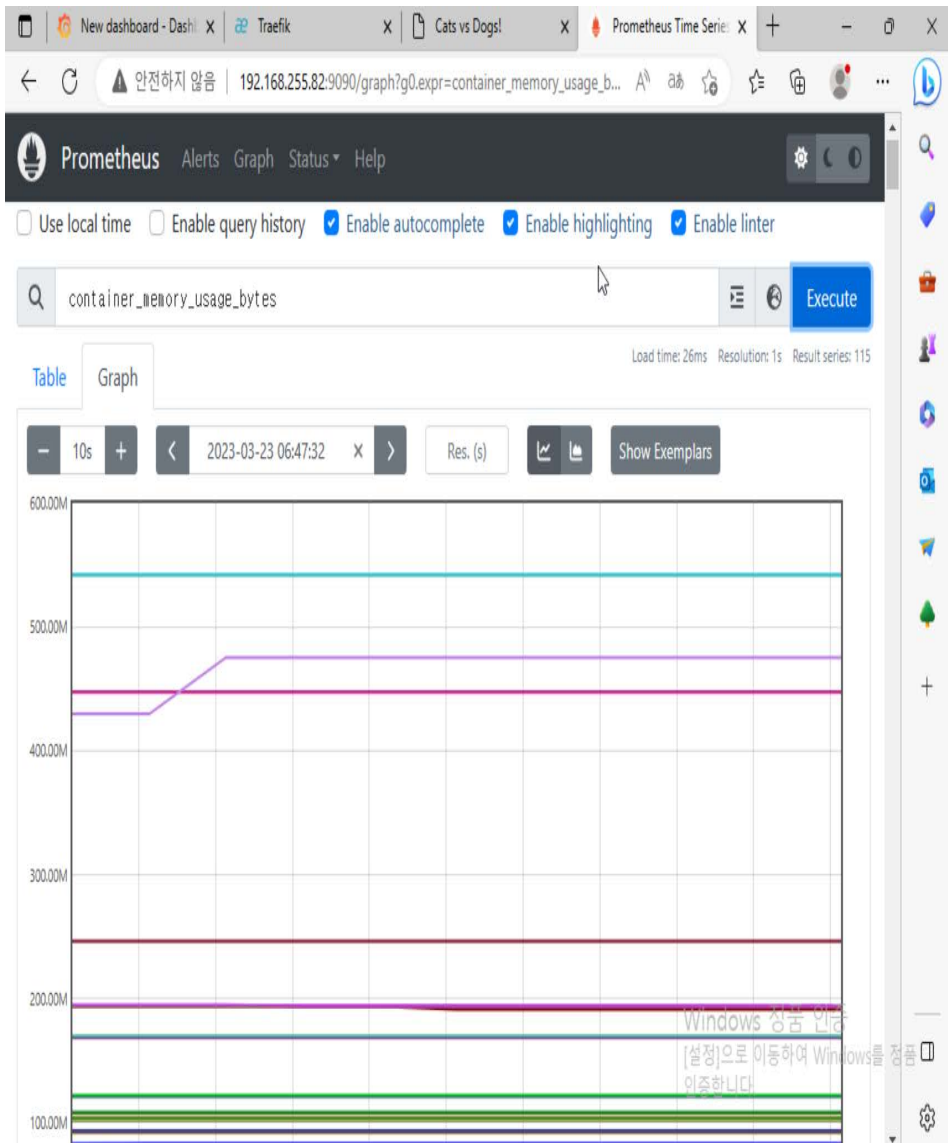
```
metal/lb-system controller-68bf958bf9-wv8gb 1/1 Running 0 3h51m
metal/lb-system speaker-fd77d 1/1 Running 0 3h51m
metal/lb-system speaker-nzptv 1/1 Running 0 3h51m
metal/lb-system speaker-pqwfd 1/1 Running 0 3h51m
```

```
apiVersion: v1
kind: Service
metadata:
  labels:
    app: vote
  name: vote
spec:
  type: LoadBalancer
  ports:
    - name: "vote-service"
      port: 80
      targetPort: 80
      #nodePort: 31000
  selector:
    app: vote
```



```
traefik traefik-89f64fd86-hzd8c 1/1 Running
traefik traefik-89f64fd86-lp6d7 1/1 Running
```

MetalLB, L4, Voting-app Service



Prometheus, Grafana Dashboard