

Q. Multi Tenant Kubernetes Security

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master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl get pods -n tenant-a -o wide
NAME                                READY   STATUS    RESTARTS   AGE   IP              NODE             NOMINATED NODE   READINESS GATES
tenant-a-app-57856ccbd4-68d5s       1/1     Running   0           11m   192.168.114.97   worker2-vm        <none>            <none>
tenant-a-app-57856ccbd4-pzgn8       1/1     Running   0           11m   192.168.94.233   worker1-vm        <none>            <none>

master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl get pods -n tenant-b -o wide
NAME                                READY   STATUS    RESTARTS   AGE   IP              NODE             NOMINATED NODE   READINESS GATES
tenant-b-app-bbb987489-gk9lq        1/1     Running   0           7m18s  192.168.114.98   worker2-vm        <none>            <none>
tenant-b-app-bbb987489-wxbbx        1/1     Running   0           7m18s  192.168.94.234   worker1-vm        <none>            <none>
test-pod                            1/1     Running   0           3m58s  192.168.114.99   worker2-vm        <none>            <none>

master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl get pods -A
NAME                                READY   STATUS    RESTARTS   AGE
kube-system/calico-kube-controllers-658d97c59c-jbhv4  1/1     Running   0           17m
kube-system/calico-node-8h725                    1/1     Running   0           17m
kube-system/calico-node-qt27p                    1/1     Running   0           16m
kube-system/calico-node-z92ms                    1/1     Running   0           15m
kube-system/coredns-57f66db9d4-4d6g9             1/1     Running   1 (162m ago)  27h
kube-system/coredns-57f66db9d4-sz4w4             1/1     Running   1 (162m ago)  27h
kube-system/etcd-master-vm                       1/1     Running   11 (162m ago)  17d
kube-system/kube-apiserver-master-vm             1/1     Running   11 (162m ago)  17d
kube-system/kube-controller-manager-master-vm     1/1     Running   14 (162m ago)  17d
kube-system/kube-proxy-bqvw7                    1/1     Running   7 (160m ago)  17d
kube-system/kube-proxy-h6lcw                    1/1     Running   11 (162m ago)  17d
kube-system/kube-proxy-mnfmr                    1/1     Running   7 (156m ago)  17d
kube-system/kube-scheduler-master-vm             1/1     Running   15 (162m ago)  17d
kube-system/metrics-server-6997c65b46-s4g94       1/1     Running   7 (147m ago)  27h
tenant-a/tenant-a-app-57856ccbd4-68d5s          1/1     Running   0           11m
tenant-a/tenant-a-app-57856ccbd4-pzgn8          1/1     Running   0           11m
tenant-b/tenant-b-app-bbb987489-gk9lq           1/1     Running   0           7m21s
tenant-b/tenant-b-app-bbb987489-wxbbx           1/1     Running   0           7m21s
tenant-b/test-pod                                1/1     Running   0           4m1s
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master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl exec -it test-pod -n tenant-b -- wget --spider tenant-a-service.tenant-a
Connecting to tenant-a-service.tenant-a (10.100.115.181:80)
wget: can't connect to remote host (10.100.115.181): Operation timed out
command terminated with exit code 1

master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl exec -it test-pod -n tenant-a -- wget --spider tenant-b-service.tenant-b
Error from server (NotFound): pods "test-pod" not found

master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl exec -it test-pod -n tenant-a -- wget --spider tenant-b-service.tenant-b
error: unable to upgrade connection: container not found ("test-pod")

master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl exec -it test-pod -n tenant-a -- wget --spider tenant-b-service.tenant-b
error: unable to upgrade connection: container not found ("test-pod")

master@master-vm: ~/k8s-multi-tenant/tenant-b$ kubectl exec -it test-pod -n tenant-a -- wget --spider tenant-b-service.tenant-b
Connecting to tenant-b-service.tenant-b (10.97.111.122:80)
wget: can't connect to remote host (10.97.111.122): Operation timed out
command terminated with exit code 1

master@master-vm: ~/k8s-multi-tenant/tenant-b$
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