# hooks

There is a few challenges:

* hooks have own shell, and their output isn’t shown in the logs
* there is a delay between operations due to asynchronous nature of Kubernetes
* shell runs another process, thus signals are not forwarded to the process

🤔 How to overcome them?

1. Get familiar with pods/hooks/hook-task.yaml.
2. Start Pod and check the its logs in the first terminal:

$ kubectl create -f pods/hooks/hook-task.yaml  
pod/hook-task created  
  
$ kubectl logs hook-task -f  
2021.06.06 09:24:24 Starting

1. In the second terminal, stop Pod the check its termination time:

$ time kubectl delete pod hook-task

Check the output in the first terminal.

1. Specify spec.terminationGracePeriodSeconds to 20.
2. Recreate the Pod and check termination time. How long is it?
3. Update preStop hook by pasting the command:

touch /app/terminate.me

1. Start and stop the Pod again. Check the termination time again. How long is it?

Did the message PreStop Hook appear in the kubectl logs? If not, why and hot to achieve this?

1. Force delete the Pod. Have you seen the the message from preStop hook?

$ kubectl delete pod hook-task --force

## Solution

There is a few challenges:

* hooks have own shell, and their output isn’t shown in the logs
* there is a delay between operations due to asynchronous nature of Kubernetes
* shell runs another process, thus signals are not forwarded to the process

🤔 How to overcome them?

* Redirect output from hook to main process.
* Take into account that it could be longer than expected.
* Don’t use signals

1. Start Pod and check the its logs in the first terminal:

$ kubectl create -f pods/hooks/hook-task.yaml  
pod/hook-task created  
  
$ kubectl logs hook-task -f  
2021.06.06 09:24:24 Starting

1. In the second terminal, stop Pod the check its termination time:

$ time kubectl delete pod hook-task  
pod "hook-task" deleted  
  
real 0m33.610s  
user 0m0.147s  
sys 0m0.040s

Check the output in the first terminal:

$ kubectl logs hook-task -f  
2021.06.11 08:39:53 Starting  
got TERM but ignored

1. Specify spec.terminationGracePeriodSeconds to 20.

...  
spec:  
 terminationGracePeriodSeconds: 20  
...

1. Recreate the Pod and check termination time. How long is it?

| 30 | 20 |
| --- | --- |
| 0m33s | 0m24s |
| 1m21s | 1m7s |
| 0m34s | 0m36s |
| 1m23s | 1m16s |

1. Update preStop hook by pasting the command:

touch /app/terminate.me

1. Start and stop the Pod again. Check the termination time again. How long is it?

0m6s 0m15s 0m11s 0m12s 0m8s

Did the message PreStop Hook appear in the kubectl logs? If not, why and hot to achieve this?

No:

$ kubectl logs hook-task -f  
2021.06.11 09:05:45 Starting  
got TERM but ignored  
2021.06.11 09:05:52 Bye

Change handler:

echo PreStop Hook > /app/my.log  
sleep 0.6  
touch /app/terminate.me

Then it appears:

$ kubectl logs hook-task -f  
2021.06.11 09:09:48 Starting  
PreStop Hook  
got TERM but ignored  
2021.06.11 09:09:59 Bye

1. Force delete the Pod. Have you seen the the message from preStop hook?

$ kubectl delete pod hook-task --force

No, message isn’t appear because hook isn’t called:

$ kubectl logs hook-task -f  
2021.06.11 09:12:46 Starting  
got TERM but ignored