

Jobs et CronJobs

Job

- Utilisé pour lancer des “batch-jobs”
- Différentes possibilités
 - lance un seul Pod
 - lance plusieurs Pods en parallèle ou en séquentiel
 - géré par `.spec.completions` et `.spec.parallelism`

Job : exemple de spécification

```
apiVersion: batch/v1
kind: Job
metadata:
  name: hello
spec:
  completions: 3
  parallelism: 1
  template:
    spec:
      restartPolicy: OnFailure
      containers:
      - name: hello
        image: alpine
        args:
        - /bin/sh
        - -c
        - sleep 10; echo Hello from kube; date
```

Annotations et labels de la ressource

Nom du Job

Job : exemple de spécification

```
apiVersion: batch/v1
```

```
kind: Job
```

```
metadata:
```

```
  name: hello
```

```
spec:
```

Spécification du Job

```
  completions: 3
```

```
  parallelism: 1
```

```
  template:
```

```
    spec:
```

```
      restartPolicy: OnFailure
```

```
      containers:
```

```
        - name: hello
```

```
          image: alpine
```

```
          args:
```

```
            - /bin/sh
```

```
            - -c
```

```
            - sleep 10; echo Hello from kube; date
```

Job : exemple de spécification

```
apiVersion: batch/v1
```

```
kind: Job
```

```
metadata:
```

```
  name: hello
```

```
spec:
```

```
  completions: 3
```

Le job sera terminé lorsque 3 Pods seront "Completed"

```
  parallelism: 1
```

```
  template:
```

```
    spec:
```

```
      restartPolicy: OnFailure
```

```
      containers:
```

```
        - name: hello
```

```
          image: alpine
```

```
          args:
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```
            - /bin/sh
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            - sleep 10; echo Hello from kube; date
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    spec:
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      containers:
      - name: hello
        image: alpine
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        - /bin/sh
        - -c
        - sleep 10; echo Hello from kube; date
```

Le job sera exécuté 3 fois, 1 fois par réplica

Les Pods tourneront de façon séquentielle

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apiVersion: batch/v1
kind: Job
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  name: hello
spec:
  completions: 3
  parallelism: 1
  template:
    spec:
      restartPolicy: OnFailure
      containers:
      - name: hello
        image: alpine
        args:
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```

La spécification du type Job

Spécification des Pods

Job : exemple de spécification

```
$ kubectl apply -f job-hello.yaml
```

```
job "hello" created
```

```
$ kubectl get job -w
```

NAME	COMPLETIONS	DURATION	AGE
hello	0/3		0s
hello	0/3	0s	0s
hello	1/3	19s	19s
hello	2/3	38s	38s
hello	3/3	57s	58s

```
$ kubectl get po | grep hello
```

hello-bbqmz	0/1	Completed	0	63s
hello-pnxvb	0/1	Completed	0	67s
hello-wk94m	0/1	Completed	0	58s

```
$ kubectl logs hello-bbqmz
```

```
Hello from kube
```

```
Tue Aug 27 05:50:40 UTC 2019
```


CronJob

- Lancement de tâches automatiques
- Similaires à la crontab Linux
- Exemples de cas d'usage
 - backup de base de données
 - rotation de fichiers de logs
 - envoi d'emails

Cronjob : exemple de spécification

apiVersion: batch/v1beta1

Version de l'API dans laquelle l'objet CronJob est défini

kind: CronJob

metadata:

name: hello

spec:

schedule: "*/1 * * * *

jobTemplate:

spec:

template:

spec:

restartPolicy: OnFailure

containers:

- name: hello

image: alpine

args:

- /bin/sh

- -c

- sleep 10; echo Hello from kube; date

cronjob-hello.yaml

Cronjob : exemple de spécification

```
apiVersion: batch/v1beta1
```

```
kind: CronJob
```

Type de la ressource

```
metadata:
```

```
  name: hello
```

```
spec:
```

```
  schedule: "*/1 * * * *"
```

```
  jobTemplate:
```

```
    spec:
```

```
      template:
```

```
        spec:
```

```
          restartPolicy: OnFailure
```

```
          containers:
```

```
            - name: hello
```

```
              image: alpine
```

```
              args:
```

```
                - /bin/sh
```

```
                - -c
```

```
                - sleep 10; echo Hello from kube; date
```

cronjob-hello.yaml

Cronjob : exemple de spécification

```
apiVersion: batch/v1beta1
```

```
kind: CronJob
```

```
metadata:
```

```
  name: hello
```

```
spec:
```

```
  schedule: "*/1 * * * *"
```

```
  jobTemplate:
```

```
    spec:
```

```
      template:
```

```
        spec:
```

```
          restartPolicy: OnFailure
```

```
          containers:
```

```
            - name: hello
```

```
              image: alpine
```

```
              args:
```

```
                - /bin/sh
```

```
                - -c
```

```
                - sleep 10; echo Hello from kube; date
```

Spécification du CronJob

Cronjob : exemple de spécification

```
apiVersion: batch/v1beta1
```

```
kind: CronJob
```

```
metadata:
```

```
  name: hello
```

```
spec:
```

```
  schedule: "*/1 * * * *"
```

```
  jobTemplate:
```

```
    spec:
```

```
      template:
```

```
        spec:
```

```
          restartPolicy: OnFailure
```

```
          containers:
```

```
            - name: hello
```

```
              image: alpine
```

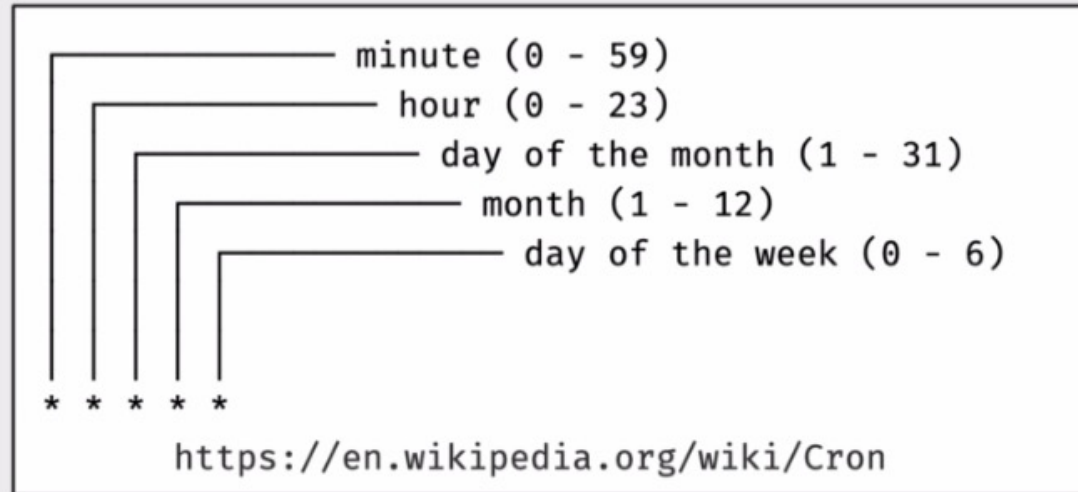
```
              args:
```

```
                - /bin/sh
```

```
                - -c
```

```
                - sleep 10; echo Hello from kube; date
```

Fréquence d'exécution (ex: toutes les minutes)



Cronjob : exemple de spécification

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```

```
kind: CronJob
```

```
metadata:
```

```
  name: hello
```

```
spec:
```

```
  schedule: "*/1 * * * *"
```

```
  jobTemplate:
```

```
    spec:
```

```
      template:
```

```
        spec:
```

```
          restartPolicy: OnFailure
```

```
          containers:
```

```
            - name: hello
```

```
              image: alpine
```

```
              args:
```

```
                - /bin/sh
```

```
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```

```
                - sleep 10; echo Hello from kube; date
```

Exemple d'écriture d'un CronJob (dans le fichier)

Spécification d'une ressource de type Job

Cronjob : exemple de spécification

```
apiVersion: batch/v1beta1
```

```
kind: CronJob
```

```
metadata:
```

```
  name: hello
```

```
spec:
```

```
  schedule: "*/1 * * * *"
```

```
  jobTemplate:
```

```
    spec:
```

```
      template:
```

```
        spec:
```

```
          restartPolicy: OnFailure
```

Spécification d'un Pod

```
          containers:
```

```
            - name: hello
```

```
              image: alpine
```

```
              args:
```

```
                - /bin/sh
```

```
                - -c
```

```
                - sleep 10; echo Hello from kube; date
```