1. 一 调度时的命令

1.1. 1 普通调度

1. 命令格式

   在原生的K8S集群下，不修改任何的配置文件，直接运行容器请求命令

   ```
   kubectl apply -f memory-demo.yaml
   ```

   memory-demo.yaml文件格式内容

   ```
   apiVersion: v1
   kind: Pod
   metadata:
     name: memory-demo6
     namespace: mem-example
   spec:
     containers:
     - name: memory-demo-ctr6
       image: polinux/stress
       resources:
         requests:
           memory: "100Mi"
         limits:
           memory: "200Mi"
       command: ["stress"]
       args: ["--vm", "1", "--vm-bytes", "150M", "--vm-hang", "1"]
   ```

2. 命令解释

   新建一个deploy，这个容器请求100M内存。

3. 命令示例

   原生调度策略，会按照节点打分，将容器请求分配到一个物理机上

1.2. 2 任务调度

1. 命令格式

   运行调度算法：extenders

   ```
   go run extenders
   ```

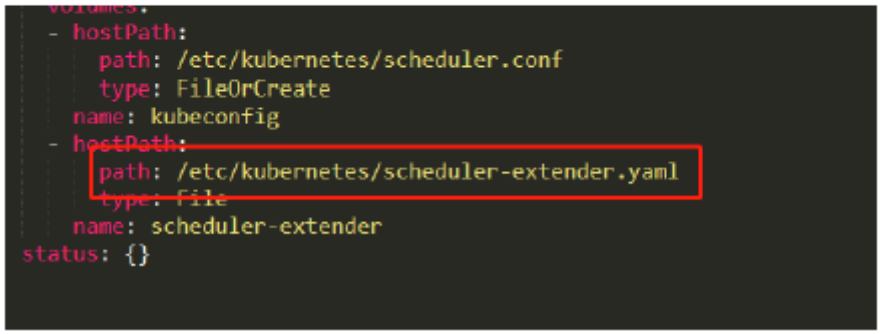
   创建yaml文件，描述一下刚刚调度算法运行的地址

   ```
   scheduler-extender-new.yaml 包含：
   apiVersion: kubescheduler.config.k8s.io/v1
   kind: KubeSchedulerConfiguration
   extenders:
   - urlPrefix: "http://127.0.0.1:8080/"
   filterVerb: filter
   ```

```
prioritizeVerb: prioritize
weight: 1
enableHTTPS: false
nodeCacheCapable: false
ignorable: true
httpTimeout: 15s
leaderElection:
leaderElect: true
clientConnection:
kubeconfig: /etc/kubernetes/scheduler.conf
```

修改配置文件，告诉系统刚刚的yaml文件的位置

```
/etc/kubernetes/manifests/kube-scheduler.yaml
```



请求一个新容器，与刚刚的请求相同

```
kubectl apply -f memory-demo.yaml
```

2. 命令解释
3. 命令示例

```
2023/06/19 17:05:45 start up sample-scheduler-extender!
2023/06/19 17:13:12 pod with name:memory-demo4 need schedule-scheme
2023/06/19 17:13:12 Node worker1 limit is:cpu→16000m,mem→60186MB.Now has requested is:cpu→100m,mem→450MB
2023/06/19 17:13:12 Node worker3 limit is:cpu→16000m,mem→60186MB.Now has requested is:cpu→100m,mem→50MB
2023/06/19 17:13:12 Best Node is worker1
2023/06/19 17:13:59 pod with name:memory-demo5 need schedule-scheme
2023/06/19 17:13:59 Node worker1 limit is:cpu→16000m,mem→60186MB.Now has requested is:cpu→100m,mem→550MB
2023/06/19 17:13:59 Node worker3 limit is:cpu→16000m,mem→60186MB.Now has requested is:cpu→100m,mem→50MB
2023/06/19 17:13:59 Best Node is worker1
2023/06/19 17:14:43 pod with name:memory-demo6 need schedule-scheme
2023/06/19 17:14:43 Node worker1 limit is:cpu→16000m,mem→60186MB.Now has requested is:cpu→100m,mem→650MB
2023/06/19 17:14:43 Node worker3 limit is:cpu→16000m,mem→60186MB.Now has requested is:cpu→100m,mem→50MB
2023/06/19 17:14:43 Best Node is worker1
```

按照我们的调度算法，请求三次，任务均被放置在worker1上。

2. 二 调度后返回的数据格式

内容为 json 格式，如下所示：

```
{
      # taskName 执行的整个任务的名称
    "taskName":"任务的名称",
    "time": "",           # 从开始到结束的耗时
    "taskType": "",       # 任务调度类型，普通调度：common;    任务调度：task;
    "tasks":[     # 任务拆分的子任务的数组，数组的元素是 子任务，为Object
        {
            "taskName":"",  # 拆分的子任务的名称
            "nodeName":"",  # 执行该子任务的节点名称
            "startTime":"", # 开始时间，格式为
            "endTime":"",   # 结束时间
            "time":""       # 任务执行耗时
        }
    ]
}
```