

CS542600 Distributed System

Lab: Kubernetes

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- The screenshot of `kubectl get nodes`

```
student@ds-student13:~/NTHU-Scheduler-Plugin$ kubectl get nodes
NAME                STATUS    ROLES    AGE   VERSION
kind-control-plane  Ready    control-plane   15h   v1.29.2
kind-worker         Ready    <none>         15h   v1.29.2
kind-worker2        Ready    <none>         15h   v1.29.2
```

- The screenshot of passing all the unit tests

```
root@580af0e8cf11:/go/src/app# go test -v ./...
?       my-scheduler-plugins/cmd/scheduler      [no test files]
=== RUN   TestCustomScheduler_PreFilter
=== RUN   TestCustomScheduler_PreFilter/pod_is_accepted
finish adding2024/06/14 06:25:17 Pod  is in Prefilter phase.
=== RUN   TestCustomScheduler_PreFilter/pod_is_just_accepted
finish adding2024/06/14 06:25:17 Pod  is in Prefilter phase.
=== RUN   TestCustomScheduler_PreFilter/pod_is_rejected
finish adding2024/06/14 06:25:17 Pod  is in Prefilter phase.
--- PASS: TestCustomScheduler_PreFilter (0.00s)
    --- PASS: TestCustomScheduler_PreFilter/pod_is_accepted (0.00s)
    --- PASS: TestCustomScheduler_PreFilter/pod_is_just_accepted (0.00s)
    --- PASS: TestCustomScheduler_PreFilter/pod_is_rejected (0.00s)
=== RUN   TestCustomScheduler_Score
=== RUN   TestCustomScheduler_Score/least_mode
2024/06/14 06:25:17 Custom scheduler runs with the mode: Least.
2024/06/14 06:25:17 Pod  is in Score phase. Calculate the score of Node m1.
2024/06/14 06:25:17 Pod  is in Score phase. Calculate the score of Node m2.
=== RUN   TestCustomScheduler_Score/most_mode
2024/06/14 06:25:17 Custom scheduler runs with the mode: Least.
2024/06/14 06:25:17 Pod  is in Score phase. Calculate the score of Node m1.
2024/06/14 06:25:17 Pod  is in Score phase. Calculate the score of Node m2.
--- PASS: TestCustomScheduler_Score (0.00s)
    --- PASS: TestCustomScheduler_Score/least_mode (0.00s)
    --- PASS: TestCustomScheduler_Score/most_mode (0.00s)
=== RUN   TestCustomScheduler_NormalizeScore
=== RUN   TestCustomScheduler_NormalizeScore/scores_in_range
=== RUN   TestCustomScheduler_NormalizeScore/scores_out_of_range
=== RUN   TestCustomScheduler_NormalizeScore/negative_score
--- PASS: TestCustomScheduler_NormalizeScore (0.00s)
    --- PASS: TestCustomScheduler_NormalizeScore/scores_in_range (0.00s)
    --- PASS: TestCustomScheduler_NormalizeScore/scores_out_of_range (0.00s)
    --- PASS: TestCustomScheduler_NormalizeScore/negative_score (0.00s)
PASS
ok      my-scheduler-plugins/pkg/plugins      0.032s
```

- Explain the 3 scenarios you design to validate your implementation by describing the expected results and showing the screenshots of the results. (You have to explain them during the demo.)
 - The correctness of `prefilter()`

- The correctness of “Least mode”
- The correctness of “Most mode”