

Muthuja Vempalli

This candidate required special arrangements to be made due to disability.

Candidate

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Session

ID: CMVQTB-AGP
Time limit: 50 min.
Report recipients: No one
Accessed from: 45.249.77.100,
45.249.77.100
Invited by: arun.k@uplers.in

Status: completed

Created on: 2023-01-17 11:49 UTC
Started on: 2023-01-18 13:13 UTC
Finished on: 2023-01-18 13:28 UTC

Notes:

N/A

Similarity Check

Status: [skipped](#)

The Candidate did not reach the minimum score for Plagiarism check.
Similar solution for task has been detected.

Test score

15%

Tasks in test

1 | KubernetesDaemonSet
Submitted in: YAML

Score

15%

Tasks Details

Medium	1. KubernetesDaemonSet	Task Score Correctness Performance		
	Create a DaemonSet template with node tolerations.	15	15	Not assessed

Task description

You are asked to create a DaemonSet manifest which should be deployed to every node in a cluster. These pods, which will be deployed as content of this DaemonSet, are meant to collect data from the nodes, and so should be deployed to a node even when it's tainted with NoSchedule taint.

The DaemonSet manifest should meet the following requirements:

- Use apps/v1 as DaemonSet definition apiVersion;
- DaemonSet name should be node-exporter;
- Daemonset will be deployed to the default namespace (no need to define it) with the command `kubectl apply -f daemonset.yaml`;
- DaemonSet revision history limit should be set to 2;
- DaemonSet should tolerate node NoSchedule taint;
- DaemonSet should have two labels and matching labels assigned, app=exporter and role=monitoring;
- DaemonSet should define a single container with the following properties:
 - Container name should be node-exporter;
 - Container image should be alpine:latest;
 - Container should expose single port, 3000;
 - Container should have two labels assigned, app=exporter and role=monitoring;
 - Container should have liveness and readiness probes:
 - The liveness probe should execute http get to path /api/healthy on the port exposed by the container with an initial delay of 10 seconds. A timeout of 5 seconds should be assigned to the probe, it should occur every 15 seconds, and it should fail after six tries.
 - The readiness probe should execute http get to path /api/ready on the port exposed by the container with an initial delay of 20 seconds. A timeout of 10 seconds should be assigned to the probe, it should occur every 15 seconds, and it should fail after three tries.
 - Container should request resources of 100m CPU and 100Mi of memory with a limit of 200m CPU and 120Mi of memory;
 - Container should have the following environment variables defined (in this exact order):
 - MY_INT_VARIABLE: 5
 - MY_STRING_VARIABLE: Hello
 - MY_BOOLEAN_VARIABLE: true

Assume that the execution environment is Kubernetes 1.17.

Solution

[See Live Version](#)

Programming language used: YAML

Total time used: 15 minutes



Effective time used: 15 minutes



Notes: not defined yet

Source code

Code: 13:28:15 UTC, yaml, final, score: 15

```
1apiVersion: apps/v1
2
3kind: DaemonSet
4
5metadata:
6
7  name: node-exporter
```

```
8
9 namespace: kube-system
10
11 labels:
12
13   k8s-app: fluentd-logging
14
15 spec:
16
17   selector:
18
19     matchLabels:
20
21       name: fluentd-elasticsearch
22
23   updateStrategy:
24
25     type: RollingUpdate
26
27     rollingUpdate:
28
29       maxUnavailable: 1
30
31   template:
32
33     metadata:
34
35       labels:
36
37         name: fluentd-elasticsearch
38
39     spec:
40
41       tolerations:
42
43
44         - key: node-role.kubernetes.io/control-plane
45
46           operator: Exists
47
48           effect: NoSchedule
49
50         - key: node-role.kubernetes.io/master
51
52           operator: Exists
53
54           effect: NoSchedule
55
56     containers:
57
58       - name: fluentd-elasticsearch
59
60         image: quay.io/fluentd_elasticsearch/fluentd:v2.5.2
61
62         volumeMounts:
63
64           - name: varlog
65
66             mountPath: /var/log
67
68           - name: varlibdockercontainers
69
70             mountPath: /var/lib/docker/containers
71
72             readOnly: true
73
74         terminationGracePeriodSeconds: 30
75
76     volumes:
77
78       - name: varlog
79
80         hostPath:
81
82           path: /var/log
83
84       - name: varlibdockercontainers
85
86         hostPath:
```

87
88

path: /var/lib/docker/containers

Analysis summary

The following issues have been detected: wrong answers.

Analysis

Correctness tests	
(OBLIGATORY) TestObligatoryDaemonSetNamelsDefined	✓ OK
(OBLIGATORY) TestObligatoryDaemonSetLabelsAreDefined	✓ OK
(OBLIGATORY) TestObligatoryDaemonSetContainerIsDefined	✓ OK
TestVerifyDaemonSetRevisionHistoryLimitsDefined	✗ WRONG ANSWER
TestVerifyDaemonSetSelectorMatchLabelsIsDefined	✓ OK
TestVerifyDaemonSetPodsLabelsAreDefined	✓ OK
TestVerifyDaemonSetContainerLivenessProbesDefined	✗ WRONG ANSWER
TestVerifyDaemonSetContainerReadinessProbesDefined	✗ WRONG ANSWER
TestVerifyDaemonSetContainerResourcesLimitsAreDefined	✗ WRONG ANSWER
TestVerifyDaemonSetContainerResourcesRequestsAreDefined	✗ WRONG ANSWER
TestVerifyDaemonSetTolerationsIsDefined	✓ OK
TestVerifyDaemonSetTolerationsEffectMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetTolerationsOperatorMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetContainerNameMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetContainerPortMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetContainerEnvVariable1ValueMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetContainerEnvVariable1NameMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetContainerEnvVariable2ValueMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetContainerEnvVariable3ValueMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetLabelsAppMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetLabelsRoleMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetPodLabelsAppMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetPodLabelsRoleMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetMatchLabelsAppMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetMatchLabelsRoleMatchDefinition	✗ WRONG ANSWER
TestVerifyDaemonSetRevisionHistoryCountMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerImageMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerEnvVariable2NameMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerEnvVariable3NameMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerProbesLivenessInitialDelayMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerProbesLivenessTimeoutSecondsMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerProbesLivenessPeriodSecondsMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerProbesLivenessFailureThresholdMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerProbesReadinessInitialDelayMatchDefinition	✗ WRONG ANSWER
TestFinalDaemonSetContainerProbesReadinessTimeoutSecondsMatchDefinition	✗ WRONG ANSWER

TestFinalDaemonSetContainerProbesReadinessPeriodSecondsMatchDefinition	✖ WRONG ANSWER
TestFinalDaemonSetContainerProbesReadinessFailureThresholdMatchDefinition	✖ WRONG ANSWER
TestFinalDaemonSetContainerResourcesCpuRequestMatchDefinition	✖ WRONG ANSWER
TestFinalDaemonSetContainerResourcesMemoryRequestMatchDefinition	✖ WRONG ANSWER