Kubernetes metrics report

Auto generated

22 November, 2019

Introduction

This report compares the metrics between multiple sets of data generated from the cloud-native-setup report generation scripts. This report was generated using the data from the **test-PR-rapid/, test-PR-scaling/** results directories.

Runtime scaling

This test measures the system memory 'free' reduction, CPU idle %, free inodes, and pod boot time as it launches more and more idle `busybox` pods on a Kubernetes cluster.

Note: CPU % is measured as a system whole - 100% represents *all* CPUs on the node.

Error in rbind(bootdata, local_bootdata, make.row.names = FALSE): object 'local_bootdata' not found

Runtime parallel scaling

This test measures the time taken to launch and delete pods in parallel using a deployment. The times are how long it takes for the whole deployment operation to complete.

```
## Error in FUN(X[[i]], ...): object 'npod' not found
```

Runtime scaling rapid

This test uses collectd to asynchronously measure CPU idle %, free memory, pod boot time, free inodes, and interface stats as it launches more and more idle `busybox` pods on a Kubernetes cluster.

Note: CPU % is measured as a system whole - 100% represents *all* CPUs on the node.

Error in Position(function(x) x > start_time, node_mem_free_data$epoch): object 'node_mem_free_data' not foun

Test setup details

This table describes the test system details, as derived from the information contained in the test results files.

What	test−PR−rapid	test−PR−scaling
Client Ver	v1.16.3	v1.16.3
Server Ver	v1.16.3	v1.16.3
No. nodes	1	1
– Node0 name	clr−30f01b5149ba4ab8b05a7ee03b6812a	clr−30f01b5149ba4ab8b05a7ee03b6812a
Have Kata	false	false
CPUs	4	4
Memory	32831924Ki	32831924Ki
MaxPods	5k	5k
PodCIDR	10.244.0.0/20	10.244.0.0/20
runtime	containerd://1.3.0	containerd://1.3.0
kernel	5.3.11−869.native	5.3.11−869.native
kubeProxy	v1.16.3	v1.16.3
Kubelet	v1.16.3	v1.16.3
OS	Clear Linux OS	Clear Linux OS

Figure 1: System configuration details

Test setup node details

This table describes node details within the Kubernetes cluster that have been used for test.

Error in eval(ei, envir): object 'complete_data' not found