### **Per-pod CPU usage in percentage (the query doesn't return CPU usage for pods without CPU limits)**

100 \* max(

rate(container\_cpu\_usage\_seconds\_total[5m])

/ on (container, pod)

kube\_pod\_container\_resource\_limits{resource="cpu"}

) by (pod)

The kube\_pod\_container\_resource\_limits metric can be scraped incorrectly if scrape config for [kube-state-metrics](https://github.com/kubernetes/kube-state-metrics/) pod is improperly configured. In this case the original pod label for this metric is moved to the exported\_pod label because of honor\_labels behavior - see [these docs](https://prometheus.io/docs/prometheus/latest/configuration/configuration/#scrape_config) for details. In this case [label\_replace](https://docs.victoriametrics.com/MetricsQL.html" \l "label_replace) function must be used for moving exported\_pod label to pod label:

100 \* max(

rate(container\_cpu\_usage\_seconds\_total[5m])

/ on (container, pod)

label\_replace(kube\_pod\_container\_resource\_limits{resource="cpu"}, "pod", "$1", "exported\_pod", "(.+)")

) by (pod)

### **Per-pod memory usage in percentage (the query doesn't return memory usage for pods without memory limits)**

100 \* max(

container\_memory\_working\_set\_bytes

/ on (container, pod)

kube\_pod\_container\_resource\_limits{resource="memory"}

) by (pod)

If the kube\_pod\_container\_resource\_limits metric is scraped incorrectly as mentioned above, then the [label\_replace](https://docs.victoriametrics.com/MetricsQL.html" \l "label_replace) function must be used for moving exported\_pod label value to pod:

100 \* max(

container\_memory\_working\_set\_bytes

/ on (container, pod)

label\_replace(kube\_pod\_container\_resource\_limits{resource="memory"}, "pod", "$1", "exported\_pod", "(.+)")

) by (pod)