



Kubernetes Cluster Overview

Cloud Insights

Tony Lavoie
October 18, 2021

This PDF was generated from https://docs.netapp.com/us-en/cloudinsights/kubernetes_landing_page.html on October 26, 2021. Always check docs.netapp.com for the latest.


Table of Contents

Kubernetes Cluster Overview 1

Kubernetes Cluster Overview

The Cloud Insights Kubernetes Explorer is a powerful tool for displaying the overall health and usage of your Kubernetes clusters and allows you to easily drill down into areas of investigation.

Clicking on **Dashboards > Kubernetes Explorer** opens the Kubernetes Cluster overview page. This overview page contains a wide variety of at-a-glance information.



Numbers displayed in blue in the various sections of this and subsequent Kubernetes Explorer pages (for example, node/pod status, namespace counts, etc.) are links to related query pages that show the details behind those numbers.

Order by:

Node & Pod Alert Level

Nodes

98

Not Ready
0

0

Unschedulable
1

1

Pods

1,082

Pending
3

3

Slots Available
23,418

0

QA_K8S_CLUSTER

CPU

3%

of allocatable
3% of capacity

Memory

26%

of allocatable
26% of capacity

Storage

78%

of capacity

Nodes

90

Not Ready
0

0

Unschedulable
1

1

Pods

945

Pending
1

1

Slots Available
21,555

0

Common Namespaces

Pods

kube-system194

oci183

openshift-sdn180

All (22)

K8S_CLUSTER_SELF

CPU

4%

of allocatable
4% of capacity

Memory

33%

of allocatable
32% of capacity

Storage

100%

of capacity

Nodes

7

Not Ready
0

0

Unschedulable
0

0

Pods

111

Pending
2

2

Slots Available
1,639

0

Common Namespaces

Pods

oci47

flink-dev-000117

openshift-sdn14

All (20)

PV_K8S_CLUSTER

CPU

27%

of allocatable
27% of capacity

Memory

71%

of allocatable
71% of capacity

Storage

100%

of capacity

Nodes

1

Not Ready
0

0

Unschedulable
0

0

Pods

26

Pending
0

0

Slots Available
224

0

Common Namespaces

Pods

au8

scaletest5

kube-system5

All (15)

Cluster Usage overview



The cluster list displays the following usage information for each cluster in your environment:

- CPU: percentage of total CPU capacity in use
- Memory: percentage of total memory used
- Storage: percentage of total storage in use

You can sort the cluster list by any of the following factors:

- Node & Pod Alert Level (default)
- Cluster Name
- Number of Nodes
- Most Utilized by Compute
- Least Utilized by Compute
- Most Utilized by Storage
- Least Utilized by Storage

Clicking on a Cluster Name will open the [detail page](#) for that cluster

Node and Pod Status



Namespaces

To the right of the screen is a list of the top three namespaces utilized in each cluster. Click the **All** link to see all namespaces for the cluster.

Top Namespaces

Common Namespaces	Pods
kube-system	194
oci	183
openshift-sdn	180
All (22)	

Common Namespaces	Pods
oci	47
flink-dev-0001	17
openshift-sdn	14
All (20)	

Common Namespaces	Pods
au	8
scaletest	5
kube-system	5
All (15)	

Click to see all
namespaces

Refining the Filter

When you are filtering, as you begin typing you are presented with the option to create a **wildcard filter** based on the current text. Selecting this option will return all results that match the wildcard expression. You can also create **expressions** using NOT or AND, or you can select the "None" option to filter for null values in the field.

Filter By namespace kube ✕ +

Create wildcard containing "kube"

kube-public

kube-system

None

Filters based on wildcards or expressions (e.g. NOT, AND, "None", etc.) display in dark blue in the filter field. Items that you select directly from the list are displayed in light blue.

Filter By namespace *kube* ✕ ci-clickhouse ✕ ✕ ✕ +

Kubernetes filters are contextual, meaning for example that if you are on a specific node page, the `pod_name` filter only lists pods related to that node. Moreover, if you apply a filter for a specific namespace, then the `pod_name` filter will list only pods on that node *and* in that namespace.

Note that Wildcard and Expression filtering works with text or lists but not with numerics, dates or booleans.

Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.