



Storage classes with NetApp Kubernetes Service on NetApp HCI

HCI

Ann-Marie Grissino
December 19, 2019

This PDF was generated from https://docs.netapp.com/us-en/hci/docs/reference_nks_storageclasses.html on April 25, 2020. Always check docs.netapp.com for the latest.

Table of Contents

- Storage classes with NetApp Kubernetes Service on NetApp HCI. 1
 - Storage classes with NKS 1
 - Storage class impact. 1
 - Example of PVC using a storage class 1

Storage classes with NetApp Kubernetes Service on NetApp HCI

After you enable cloud services on NetApp HCI and enable NetApp Kubernetes Service (NKS), Kubernetes storage classes are created.

When you add applications in NKS, you need to know the storage class and its provisioner.

Storage classes with NKS

The following table lists the storage classes and the associated provisioners and IOPS values.

Storage class	Provisioner	IOPS minimum	IOPS maximum	IOPS burst
solidfire-bronze	netapp.io/trident	1000	4000	6000
solidfire-silver	netapp.io/trident	5000	25,000	40,000
solidfire-gold	netapp.io/trident	15,000	180,000	200,000
vsphere (default)	kubernetes.io/vsphere-volume	NA	NA	NA

Storage class impact

Storage classes affect storage pools, QoS values, and persistent volume claims in the following ways:

- Each NetApp Element storage class uses a unique storage pool.
- Storage pools are identified by a set of unique QoS (IOPS) values.
- When a Persistent Volume Claim (PVC) uses one of the "solidfire" storage classes, a volume within the referred storage pool is created on Element.
- Trident creates the PV with the storage class and the storage pool attributes.
- Kubernetes mounts the volume to the pod.

Example of PVC using a storage class

This example shows a volume created with the *solidfire-gold* storage class IOPS values on Element. When a pod uses this PVC, the new volume with the *solidfire-gold* IOPS values is mounted to the pod.

```
kind: PersistentVolumeClaim
apiVersion: v1
metadata:
  name: pvclaim-gold
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 10Gi
  storageClassName: solidfire-gold
```

Find more information

- [NetApp Cloud Central](#)
- [NetApp Cloud Documentation](#)
- [NetApp HCI Documentation Center](#)

Copyright Information

Copyright © 2019–2020 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.