



# **Run storage efficiency operations at less busy times**

## **Active IQ Unified Manager**

NetApp  
March 30, 2022

This PDF was generated from [https://docs.netapp.com/us-en/active-iq-unified-manager/performance-checker/concept\\_what\\_storage\\_efficiency\\_is.html](https://docs.netapp.com/us-en/active-iq-unified-manager/performance-checker/concept_what_storage_efficiency_is.html) on March 30, 2022. Always check docs.netapp.com for the latest.

# Table of Contents

Run storage efficiency operations at less busy times .....	1
What storage efficiency is .....	1

# Run storage efficiency operations at less busy times

You can modify the policy or schedule that handles storage efficiency operations to run when the impacted volume workloads are less busy.

Storage efficiency operations can use a high amount of cluster CPU resources and become a bully to the volumes on which the operations are being run. If the victim volumes have high activity at the same time when the storage efficiency operations are run, their latency can increase and trigger an event.

On the Event details page, the System Diagnosis section displays workloads in the QoS policy group by peak deviation in activity to identify the bully workloads. If you see “storage efficiency” displayed near the top of the table, these operations are bullying the victim workloads. By modifying the efficiency policy or schedule to run when these workloads are less busy, you can prevent the storage efficiency operations from causing contention on a cluster.

You can use ONTAP System Manager to manage efficiency policies. You can use the ONTAP commands to manage efficiency policies and schedules.

## What storage efficiency is

Storage efficiency enables you to store the maximum amount of data for the lowest cost and accommodates rapid data growth while consuming less space. NetApp strategy for storage efficiency is based on the built-in foundation of storage virtualization and unified storage provided by its core ONTAP operating system and Write Anywhere File Layout (WAFL) file system.

Storage efficiency includes using technologies such as thin provisioning, Snapshot copy, deduplication, data compression, FlexClone, thin replication with SnapVault and volume SnapMirror, RAID-DP, Flash Cache, Flash Pool aggregate, and FabricPool-enabled aggregates which help to increase storage utilization and decrease storage costs.

The unified storage architecture allows you to efficiently consolidate a storage area network (SAN), network-attached storage (NAS), and secondary storage on a single platform.

High-density disk drives, such as serial advanced technology attachment (SATA) drives configured within Flash Pool aggregate or with Flash Cache and RAID-DP technology, increase efficiency without affecting performance and resiliency.

A FabricPool-enabled aggregate includes an all SSD aggregate or HDD aggregate (starting with ONTAP 9.8) as the local performance tier and an object store that you specify as the cloud tier. Configuring FabricPool helps you manage which storage tier (the local tier or the cloud tier) data should be stored based on whether the data is frequently accessed.

Technologies such as thin provisioning, Snapshot copy, deduplication, data compression, thin replication with SnapVault and volume SnapMirror, and FlexClone offer better savings. You can use these technologies individually or together to achieve maximum storage efficiency.

## Copyright Information

Copyright © 2022 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.