



Performance Cluster Summary page

Active IQ Unified Manager 9.8

NetApp
February 20, 2023

Table of Contents

- Performance Cluster Summary page 1
- Cluster performance events pane 1
- Managed Objects pane 2

Performance Cluster Summary page

The Performance Cluster Summary page provides a summary of the active events, IOPS performance, and MB/s performance for a cluster. This page also includes the total count of the storage objects in the cluster.

Cluster performance events pane

The Cluster performance events pane displays performance statistics and all active events for the cluster. This is most helpful when monitoring your clusters and all cluster-related performance and events.

All Events on this Cluster pane

The All Events on this Cluster pane displays all active cluster performance events for the preceding 72 hours. The Total Active Events is displayed at the far left; this number represents the total of all New and Acknowledged events for all storage objects in this cluster. You can click the Total Active Events link to navigate to the Events Inventory page, which is filtered to display these events.

The Total Active Events bar graph for the cluster displays the total number of active critical and warning events:

- Latency (total for nodes, aggregates, SVMs, volumes, LUNs, and namespaces)
- IOPS (total for clusters, nodes, aggregates, SVMs, volumes, LUNs, and namespaces)
- MB/s (total for clusters, nodes, aggregates, SVMs, volumes, LUNs, namespaces, ports, and LIFs)
- Performance Capacity Used (total for nodes and aggregates)
- Utilization (total for nodes, aggregates, and ports)
- Other (cache miss ratio for volumes)

The list contains active performance events triggered from user-defined threshold policies, system-defined threshold policies, and dynamic thresholds.

Graph data (vertical counter bars) is displayed in red (■) for critical events, and yellow (■) for warning events. Position your cursor over each vertical counter bar to view the actual type and number of events. You can click **Refresh** to update the counter panel data.

You can show or hide critical and warning events in the Total Active Events performance graph by clicking the **Critical** and **Warning** icons in the legend. If you hide certain event types, the legend icons are displayed in gray.

Counter panels

The counter panels display cluster activity and performance events for the preceding 72 hours, and includes the following counters:

- **IOPS counter panel**

IOPS indicates the operating speed of the cluster in number of input/output operations per second. This counter panel provides a high-level overview of the cluster's IOPS health for the preceding 72-hour period. You can position your cursor over the graph trend line to view the IOPS value for a specific time.

- **MB/s counter panel**

MB/s indicates how much data has been transferred to and from the cluster in megabytes per second. This counter panel provides a high-level overview of the cluster's MB/s health for the preceding 72-hour period. You can position your cursor over the graph trend line to view the MB/s value for a specific time.

The number at the top right of the chart in the gray bar is the average value from the last 72-hour period. Numbers shown at the bottom and top of the trend line graph are the minimum and maximum values for the last 72-hour period. The gray bar below the chart contains the count of active (new and acknowledged) events and obsolete events from the last 72-hour period.

The counter panels contain two types of events:

- **Active**

Indicates that the performance event is currently active (new or acknowledged). The issue causing the event has not corrected itself or has not been resolved. The performance counter for the storage object remains above the performance threshold.

- **Obsolete**

Indicates that the event is no longer active. The issue causing the event has corrected itself or has been resolved. The performance counter for the storage object is no longer above the performance threshold.

For **Active Events**, if there is one event, you can position your cursor over the event icon and click the event number to link to the appropriate Event Details page. If there is more than one event, you can click **View all Events** to display the Events Inventory page, which is filtered to show all events for the selected object counter type.

Managed Objects pane

The Managed Objects pane in the Performance Summary tab provides a top-level overview of the storage object types and counts for the cluster. This pane enables you to track the status of the objects in each cluster.

The managed objects count is point-in-time data as of the last collection period. New objects are discovered at 15-minute intervals.

Clicking the linked number for any object type displays the object performance inventory page for that object type. The object inventory page is filtered to show only the objects on this cluster.

The managed objects are:

- **Nodes**

A physical system in a cluster.

- **Aggregates**

A set of multiple redundant array of independent disks (RAID) groups that can be managed as a single unit for protection and provisioning.

- **Ports**

A physical connection point on nodes that is used to connect to other devices on a network.

- **Storage VMs**

A virtual machine providing network access through unique network addresses. An SVM might serve data out of a distinct namespace, and is separately administrable from the rest of the cluster.

- **Volumes**

A logical entity holding accessible user data through one or more of the supported access protocols. The count includes both FlexVol volumes and FlexGroup volumes; it does not include FlexGroup constituents.

- **LUNs**

The identifier of a Fibre Channel (FC) logical unit or an iSCSI logical unit. A logical unit typically corresponds to a storage volume, and is represented within a computer operating system as a device.

- **Network Interfaces**

A logical network interface representing a network access point to a node. The count includes all interface types.

Copyright information

Copyright © 2023 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.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

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.