



# **Analyze wellness attributes**

Active IQ Digital Advisor

NetApp  
April 18, 2022

# Table of Contents

- Analyze wellness attributes ..... 1
  - Understand wellness ..... 1
  - View the risk and manually take corrective actions ..... 2
  - Detect Security Vulnerability ..... 3
  - Protect systems against ransomware risks ..... 4
  - View and acknowledge the risk ..... 4
  - View wellness history ..... 5
  - View risks that can be automatically mitigated using Unified Manager or Ansible Playbook ..... 5
  - Avoid the downtime and possible data loss ..... 6
  - Subscribe to wellness review email ..... 8
  - Renew the software and hardware of your storage system ..... 9
  - Analyze the wellness of clusters and nodes ..... 9

# Analyze wellness attributes

## Understand wellness

Wellness widget provides detailed information about your storage system. It provides information about different attributes of your storage system, such as performance and efficiency, capacity, configuration settings, security vulnerabilities, renewals, and others.

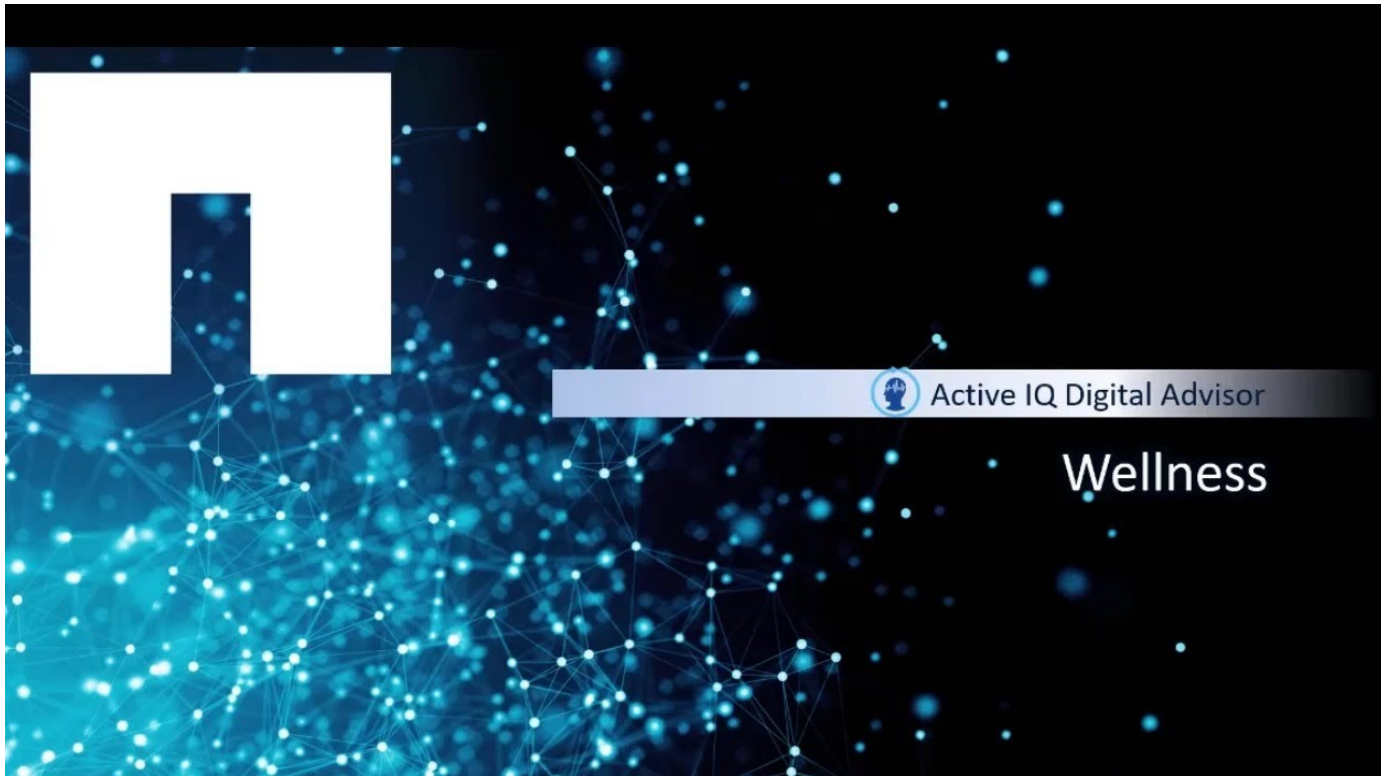


The wellness widget also provides information about the risks and the actions that should be taken to mitigate the risk for each wellness attribute. The following are the types of risks and the associated consequence for each risk:

Risk Type	Consequence
Critical	Data loss, data corruption, cluster data outage, personal safety issue, or potential legal compliance issue.
High	Short-term loss of data access or prolonged loss of node redundancy.
Medium	Performance degradation or short-term loss of node redundancy.

Risk Type	Consequence
Low	Low impact scenarios
Best Practice	Deviations from documented best practices

You can view the following video to understand the importance of the wellness attributes:



## View the risk and manually take corrective actions

You can analyze the wellness attributes of your storage system by viewing the actions and risks associated with them. You should view the associated corrective actions and manually mitigate the risk.

### Steps

1. Click the **Wellness** widget on the dashboard or click **View All Actions** to view the list of all the actions and risks.
2. View the **Actions** and **Risks** associated with the wellness attribute.
3. Click **Actions** to view the risks associated with the actions, click **Risks** to view all the risks, or click **Affected Systems** to view the systems that require attention.
4. Click the risk name to view information about the risk.
5. Click the associated corrective actions and follow the information to resolve the risk.

The steps to mitigate the risks are same for all wellness attributes. You can view the following video to monitor and fix security related issues:



## Detect Security Vulnerability

The NetApp security site is the source of truth for NetApp Product Security:

<https://security.netapp.com>

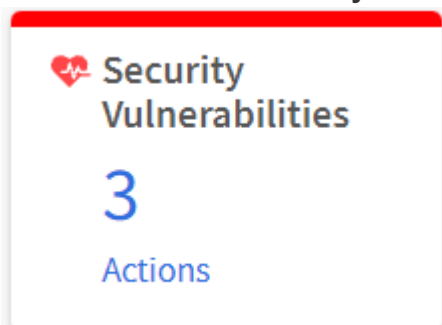
Active IQ utilizes telemetry data and published product security advisories to detect security issues for covered\* and support-entitled products. Product telemetry data must be transmitted to NetApp via AutoSupport to allow Active IQ to detect risks.

For additional NetApp product security information, including products not covered by Active IQ, visit <https://security.netapp.com>

\*Covered products: ONTAP 9 (on-prem and cloud), SANtricity OS Controller Software, NetApp SolidFire (Element Software), StorageGRID, Active IQ Unified Manager, ONTAP Tools for VMware (OTV)

### Steps

1. Log in to Active IQ Digital Advisor.
2. Click **Actions** in the **Security Vulnerabilities** widget.



For the high-impact security risks, follow the recommended action that is to upgrade the operating system.

3. Click the **Unique Risks** tab, and then click the link in the **Corrective Action** column.

Fix it	Risk Name ↑	Mitigation ↑	Corrective Action	Systems	Impact ↑
 	Clustered Data ONTAP has been determined to ha...	Potentially Non-disruptive	<a href="#">NTAP-20180423-0003</a>	1	High

The risk is fixed in ONTAP 9.7P8 and later.

Advisory ID: NTAP-20200814-0005 Version: 6.0 Last updated: 12/03/2020 Status: Interim CVEs: CVE-2020-9490, CVE-2020-11984, CVE-2020-11993

Overview Affected Products Remediation Revision History

### Software Versions and Fixes

NetApp's currently available patches are listed below.

Product	First Fixed in Release
Clustered Data ONTAP	<a href="https://mysupport.netapp.com/site/products/all/details/ontap9/downloads-tab/download/62286/9.5P15">https://mysupport.netapp.com/site/products/all/details/ontap9/downloads-tab/download/62286/9.5P15</a> <a href="https://mysupport.netapp.com/site/products/all/details/ontap9/downloads-tab/download/62286/9.6P11">https://mysupport.netapp.com/site/products/all/details/ontap9/downloads-tab/download/62286/9.6P11</a> <a href="https://mysupport.netapp.com/site/products/all/details/ontap9/downloads-tab/download/62286/9.7P8">https://mysupport.netapp.com/site/products/all/details/ontap9/downloads-tab/download/62286/9.7P8</a>

4. The most important step is to plan OS upgrade in the **Upgrade Advisor** in Active IQ Digital Advisor.

## Protect systems against ransomware risks

When you log in to the Active IQ Digital Advisor, you can view the **Actions** highlighted on the **Ransomware Defense** widget, which shows the risk counts.

You can view the Snapshot creation, retention, and ONTAP FPolicy risks, and then take actions to fix them.

### Steps

1. Log in to Active IQ Digital Advisor.
2. Click **Actions** on the **Ransomware Defense** widget.
3. For the risks that are displayed, check the impact level and follow the recommended actions.
4. Click the Unique Risks tab and link in the **Corrective Action** column.
5. Click the **Affected Systems** tab to view systems with risks.
6. Follow remediation actions that are recommended to protect the systems.

## View and acknowledge the risk

You can analyze the wellness attributes of your storage system by viewing the actions and risks associated with them. You should view the corrective actions and manually mitigate the risk.

### Steps

1. Click the wellness attribute widget on the dashboard or click **View All Actions** to view the list of all the actions and risks.
2. View the **Actions** and **Risks** associated with the wellness attribute.
3. Click **Actions** to view the risks associated with the actions, click **Risks** to view all the risks, or click

**Affected Systems** to view the systems that require attention.

4. Click the risk to view the risk summary.
5. Click **Ack** to acknowledge the risk.

The detailed risk summary information is provided along with corrective actions that should be manually performed to mitigate the risk.

6. If you do not want to or are unable to mitigate the risk at this time, provide the values for the fields and click **Acknowledge**.

The risk will be added to acknowledged risks.



If you no longer want a risk to be acknowledged, you can disregard the risk by clicking **Un-Ack** and following the same steps.

## View wellness history

You can view system risks occurring in the past three months, so that you can learn how they are faring overtime.

These risks are classified under four types of risks— **Unresolved**, **New**, **Resolved**, and **Acknowledged**. They are represented by different colors. The summary of these risks is represented through a **Risk History** graph.

### Steps

1. On the dashboard, in the **Wellness** pane, click **View All Actions**.
2. Click **Wellness History**.
3. In the **Risk History** graph, click the category for which you want to view the risk history.

When you hover over the colored bars, they display information on the number of risks in each category. Upon clicking the respective risk category, the information gets displayed in the **Risk Information** table.

You can also download risk summary in an Excel sheet.

## View risks that can be automatically mitigated using Unified Manager or Ansible Playbook



You can analyze your storage system by viewing the actions and risks, and mitigate them using Active IQ Unified Manager or Ansible Playbook.







### Steps

1. Click **View All Actions** on the dashboard.
2. Click **Actions** to view the risks associated with the actions, click **Risks** to view all the risks, or click **Affected Systems** to view the systems that require attention.

If the risk can be mitigated using Active IQ Unified Manager, the  icon is highlighted and if the risk can be mitigated using Ansible Playbook, the  icon is highlighted.

To mitigate the risk using Unified Manager	To mitigate the risk using Ansible Playbook
<ol style="list-style-type: none"> <li>1. Click the  icon.</li> <li>2. Click <b>Fix It</b> to launch Active IQ Unified Manager.</li> <li>3. Click <b>Install</b> to install Active IQ Unified Manager 9.7 or later to use the <b>Fix It</b> option.</li> <li>4. Click <b>Upgrade</b> to upgrade to Active IQ Unified Manager 9.7 or later to use the <b>Fix It</b> option.</li> </ol>	<ol style="list-style-type: none"> <li>1. Click the  icon.</li> <li>2. Click <b>Download</b> to download the AFF and FAS firmware Ansible Automation package.</li> </ol>



A SupportEdge Advisor or SupportEdge Expert contract is required to use the **Fix It** option and the Ansible Playbook features.

## Avoid the downtime and possible data loss

When you log in to the Active IQ Digital Advisor and notice the red badge on the



**Availability and Protection** widget, you can take actions to fix critical risks. Without the firmware fix, these drives are vulnerable to become inoperable after a certain number of hours of being powered on. Fixing this would avoid both the downtime and possible data loss.

**Steps**

- 1. Log in to the Active IQ Digital Advisor.
- 2. Click **Actions** in the **Availability & Protection** widget.



For the high-impact security risks, follow the recommended action that is to update disk firmware.

- 3. Click the **Risk Name** link for viewing risk summary.

**Risk Summary** ✕

**Impact:**  
**High**

**Mitigation:**  
Potentially Non-disruptive

**Public:**  
Yes

**Category:**  
FAS Hardware

**Internal Info:**  
[Signature: 5608](#)

**Corrective Action:**  
[KB ID: 5U448](#)

**Risk:**  
CRITICAL - NetApp has identified certain SSD (Solid State Drive) models that have a higher failure rate compared to other models shipped by NetApp.

**Potential Impact:**  
The drive model(s) identified will fail after if power-cycled after 70,000 power-on hours (~8 years of use), which could lead to data loss or outage if multiple drives are simultaneously affected.

**Details:**  
This storage system has 120 model X447\_PHM2800MCTD drives installed that are not running the latest firmware.

- 4. Click the **Unique Risks** tab, and then click the link in the **Corrective Action** column.

Fix It	Risk Name	Mitigation ↑	Corrective Action	Systems	Impact ↑
	CRITICAL - NetApp has identified certain SSD (Sol...	Potentially Non-disruptive	<a href="#">KB ID: 5U448</a>	4	High

Active IQ Digital Advisor generates custom Ansible scripts or playbooks to update the required disk firmware, including the disk firmware files.

- 5. Click the **Ansible “A”** icon to generate and download the scripts.

## Update AFF and FAS Firmware

[Quick Start Guide](#)

### Risk Name:

CRITICAL - NetApp has identified certain SSD (Solid State Drive) models that have a higher failure rate compared to other models shipped by NetApp.

#### Disk Firmware Download Summary (2 Files)

- Ansible Playbook and Inventory - 1 File
- Disk Firmware - 1 File

#### Suggestion:

You should be logged in to [NetApp Support Site](#) to download the files.

 Download

## Subscribe to wellness review email

You can subscribe to the wellness review email to receive a monthly email that summarizes wellness status, systems that are nearing their renewal dates, systems that require an upgrade for the NetApp products in your installed base.

You will receive a wellness review email so that you can view a monthly summary and take action for your systems.

You also have options to view, edit, share, and delete your subscriptions. At any time, if you decide to not receive the email, you can unsubscribe from getting email as well.

After the subscription is enabled, you should select a start date when adding a subscription.

The monthly email summary provides a view of outstanding wellness, renewal, upgrade, and health check actions. You can confirm the email address and the email is sent to the specified email address.

You also have the option to delete subscriptions.



This feature is available only through NetApp SupportEdge Advisor and SupportEdge Expert service offerings.

### Steps

1. From the left pane, click **Wellness Review**.
2. Click **Add Subscription**.
3. Provide the required information in the **Name the Subscription**, **Choose Category**, **Search Customer**, and **Email** fields in the **Add New Subscription** dialog box.
4. Click **Subscribe**.

Upon successful subscription, you will receive a **Subscription was added** message.

# Renew the software and hardware of your storage system

You can proactively identify the software and hardware that have expired or are near expiration in the next 6 months, and send a request to renew the hardware and software.

## Steps

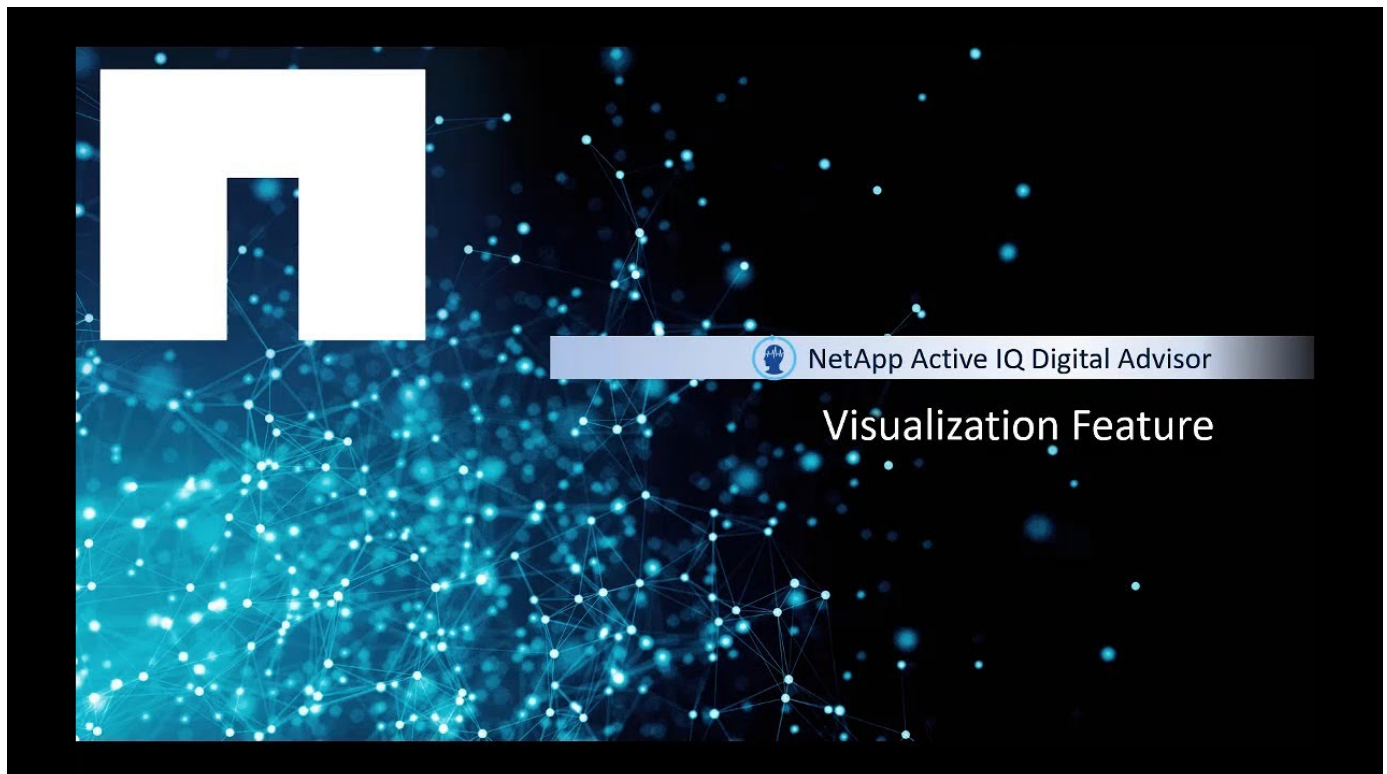
1. Click **Renewals** from the **Planning** widget.
2. Select the systems that you want to renew and click **Renew**.
3. Optionally, provide additional comments.
4. Click **Send**.

# Analyze the wellness of clusters and nodes

You can analyze the wellness of your clusters and nodes using ClusterViewer, a one-stop source for information on the physical and logical configuration of your clusters and nodes.

ClusterViewer provides information, such as stack diagrams of your nodes, storage usage and efficiency, headroom in hardware capacity, and so on, that helps you take informed decisions to improve the wellness of your clusters and nodes.

You can view visualizations or graphical representations of the physical configuration of your nodes at cable, stack, and RAID Disk levels. You can also download the visualizations in SVG format.



## Steps

1. In the **Inventory** widget, select the cluster or node (host) that you want.

2. At the cluster or node level, click **ClusterViewer** next to the **Configuration** widget.
3. Click the **Visualization** tab to view a graphical representation of the cluster.

## 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.