



Use Ransomware Protection

Ransomware Protection

NetApp
July 19, 2022

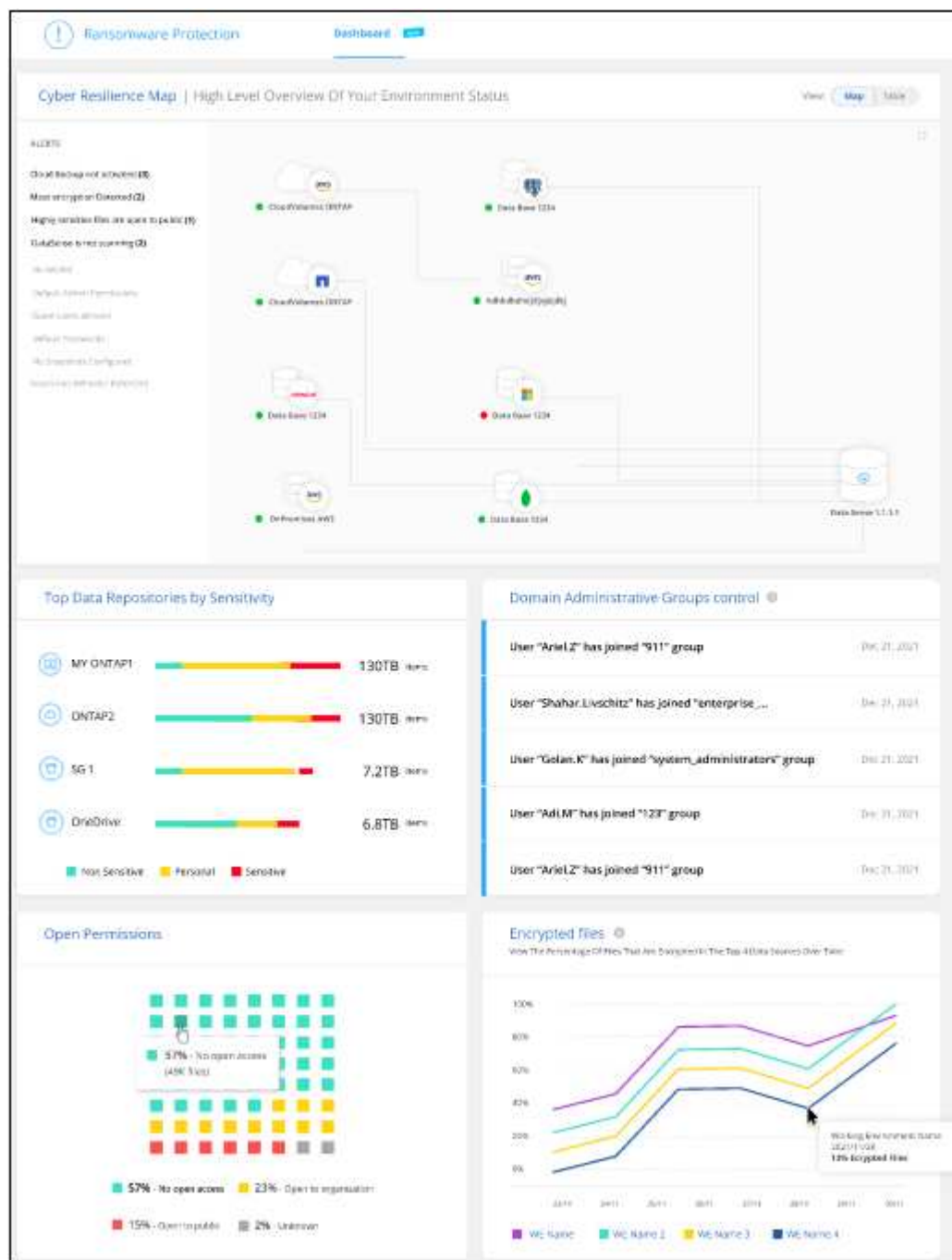
Table of Contents

Use Ransomware Protection	1
Managing cyber security recommendations for your data sources	1

Use Ransomware Protection

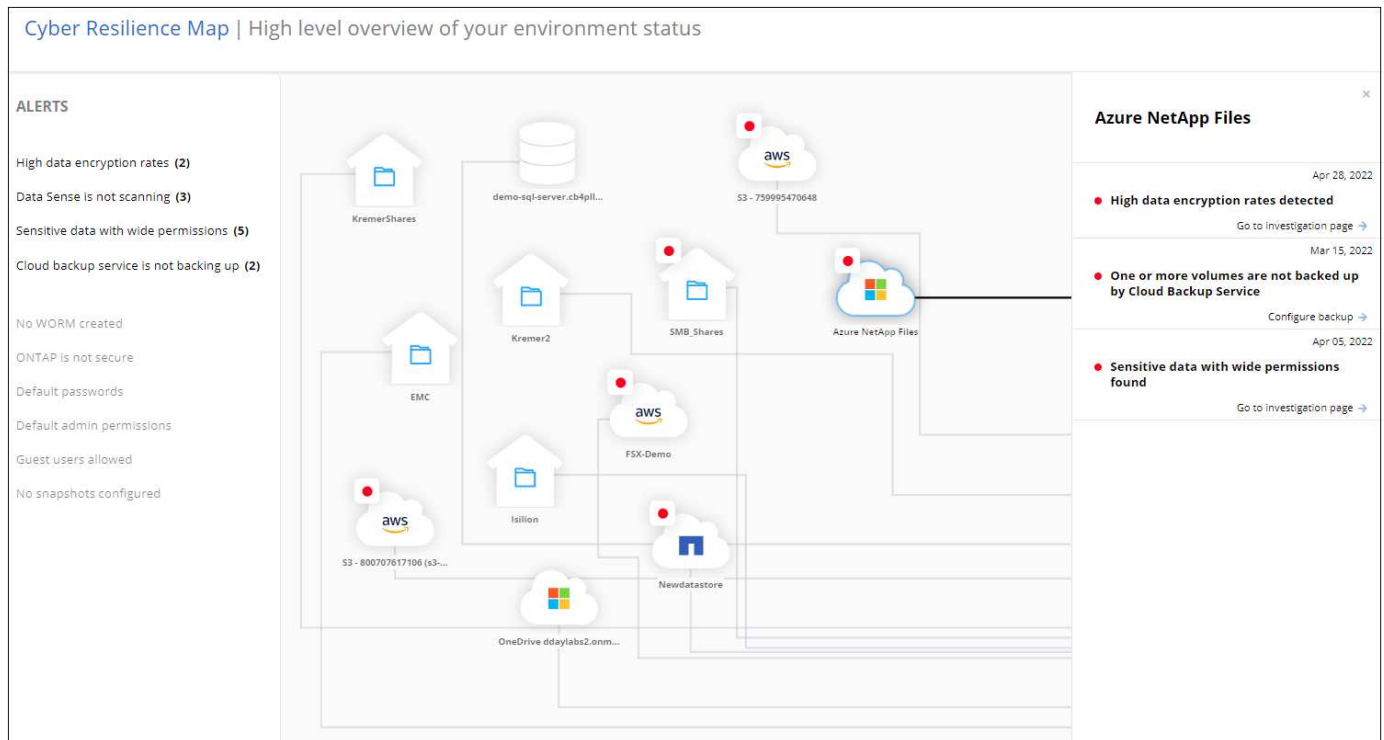
Managing cyber security recommendations for your data sources

Use the Cloud Manager Ransomware Protection Dashboard to view an overview of the cyber resilience of all your working environments and data sources. You can drill down in each area to find more details and possible remediations.



Cyber Resilience Map

The Cyber Resilience Map is the main area in the dashboard. It enables you to see all your working environments and data sources in a visual manner and be able to view relevant cyber-resilience information.



The map consists of three parts:

Left panel

Shows a list of alerts for which the service is monitoring across all of your data sources. It also indicates the number of each particular alert that is active in your environment. Having a large number of one type of alert may be a good reason to try to resolve those alerts first.

Center panel

Shows all of your data sources, services, and Active Directory in a graphical format. Healthy environments have a green indicator and environments that have alerts have a red indicator.

Right panel

After you click on a data source that has a red indicator, this panel shows the alerts for that data source and provides recommendations to resolve the alert. Alerts are sorted so that the most recent alerts are listed first. Many recommendations lead you to another Cloud Manager service where you can resolve the issue.

These are the currently tracked alerts and suggested remediations.

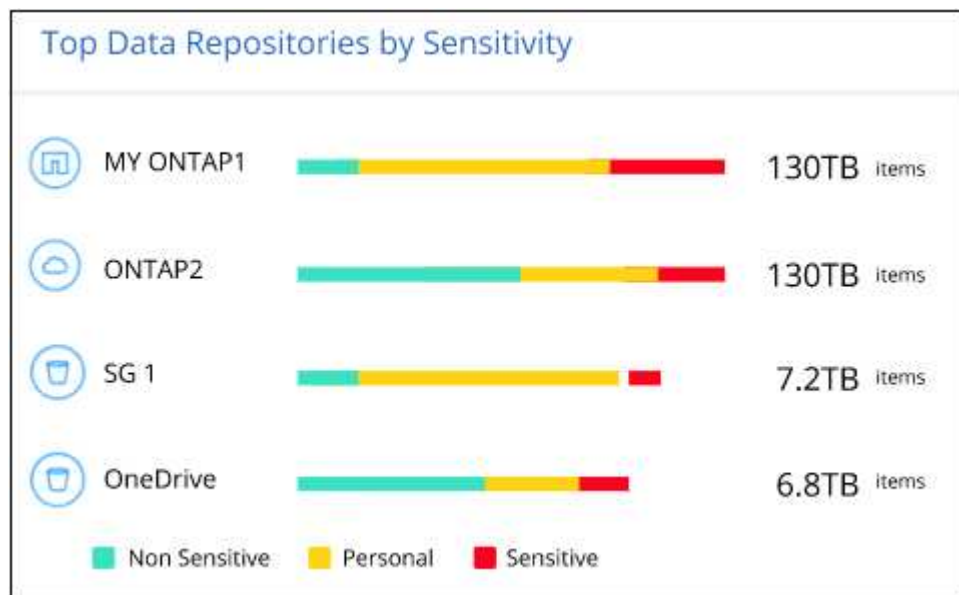
Alert	Description	Remediation
High data encryption rates detected	An abnormal increase in the percentage of encrypted files, or corrupted files, in the data source has occurred. This means that there was a greater than 20% increase in the percentage of encrypted files in the past 7 days. For example, if 50% of your files are encrypted, then a day later this number increases to 60%, you would see this alert.	Click the link to launch the Data Sense Investigation page . There you can select the filters for the specific <i>Working Environment</i> and <i>Category (Encrypted and Corrupted)</i> to view the list of all encrypted and corrupted files.
Sensitive data with wide permissions found	Sensitive data is found in files and the access permissions level is too high in a data source.	Click the link to launch the Data Sense Investigation page . There you can select the filters for the specific <i>Working Environment</i> , <i>Sensitivity Level (Sensitive Personal)</i> , and <i>Open Permissions</i> to view the list of the files that have this issue.
One or more volumes are not backed up using Cloud Backup	Some volumes in the working environment aren't being protected using Cloud Backup .	Click the link to launch Cloud Backup and then you can identify the volumes that aren't being backed up in the working environment, and then decide if you want to enable backups on those volumes.
One or more repositories (volumes, buckets, etc.) in your data sources are not being scanned by Data Sense	Some data in your data sources isn't being scanned using Cloud Data Sense to identify compliance and privacy concerns and find optimization opportunities.	Click the link to launch Data Sense and enable scanning and mapping for the items that are not being scanned.
On-box anti-ransomware is not active for all volumes	Some volumes in the on-prem ONTAP system don't have the NetApp anti-ransomware feature enabled.	Click the link and you are redirected to the Harden your ONTAP environment panel and to the working environment with the issue. There you can investigate how best to fix the issue.
ONTAP version is not updated	The version of ONTAP software installed on your clusters are not in accordance with the recommendations from the NetApp Security Hardening Guide for ONTAP Systems .	Click the link and you are redirected to the Harden your ONTAP environment panel and to the working environment with the issue. There you can investigate how best to fix the issue.
Snapshots not configured for all volumes	Some volumes in the working environment aren't being protected by creating volume snapshots.	Click the link and you are redirected to the Harden your ONTAP environment panel and to the working environment with the issue. There you can investigate how best to fix the issue.

Alert	Description	Remediation
File operations auditing is not turned on for all SVMs	Some storage VMs in the working environment don't have file system auditing enabled. It is recommended so you can keep track of users actions on your files.	Click the link and you are redirected to the Harden your ONTAP environment panel and to the working environment with the issue. There you can investigate whether you need to enable NAS auditing on your SVMs.

Top data repositories by data sensitivity

The *Top Data Repositories by Sensitivity Level* panel lists up to the top four data repositories (working environments and data sources) that contain the most sensitive items. The bar chart for each working environment is divided into:

- Non-Sensitive data
- Personal data
- Sensitive Personal data



You can hover over each section to see the total number of items in each category.

Click each area to view the filtered results in the Data Sense Investigation page so that you can investigate further.

Domain Administrator Group control

The *Domain Administrator Group control* panel shows the most recent users who have been added into your domain administrator groups so that you can see if all the users should be allowed in those groups. You must have [integrated a global Active Directory](#) into Cloud Data Sense for this panel to be active.

Domain Administrative Groups control ⓘ	
User "Ariel.Z" has joined "911" group	Dec 21, 2021
User "Shahar.Livschitz" has joined "enterprise_..."	Dec 21, 2021
User "Golan.K" has joined "system_administrators" group	Dec 21, 2021
User "Adi.M" has joined "123" group	Dec 21, 2021

The default administrative admin groups include "Administrators", "Domain Admins", "Enterprise Admins", "Enterprise Key Admins", and "Key Admins".

Data listed by types of open permissions

The *Open Permissions* panel shows the percentage for each type of permission that exist for all files that are being scanned. The chart is provided from Data Sense and it shows the following types of permissions:

- No Open Access
- Open to Organization
- Open to Public
- Unknown Access



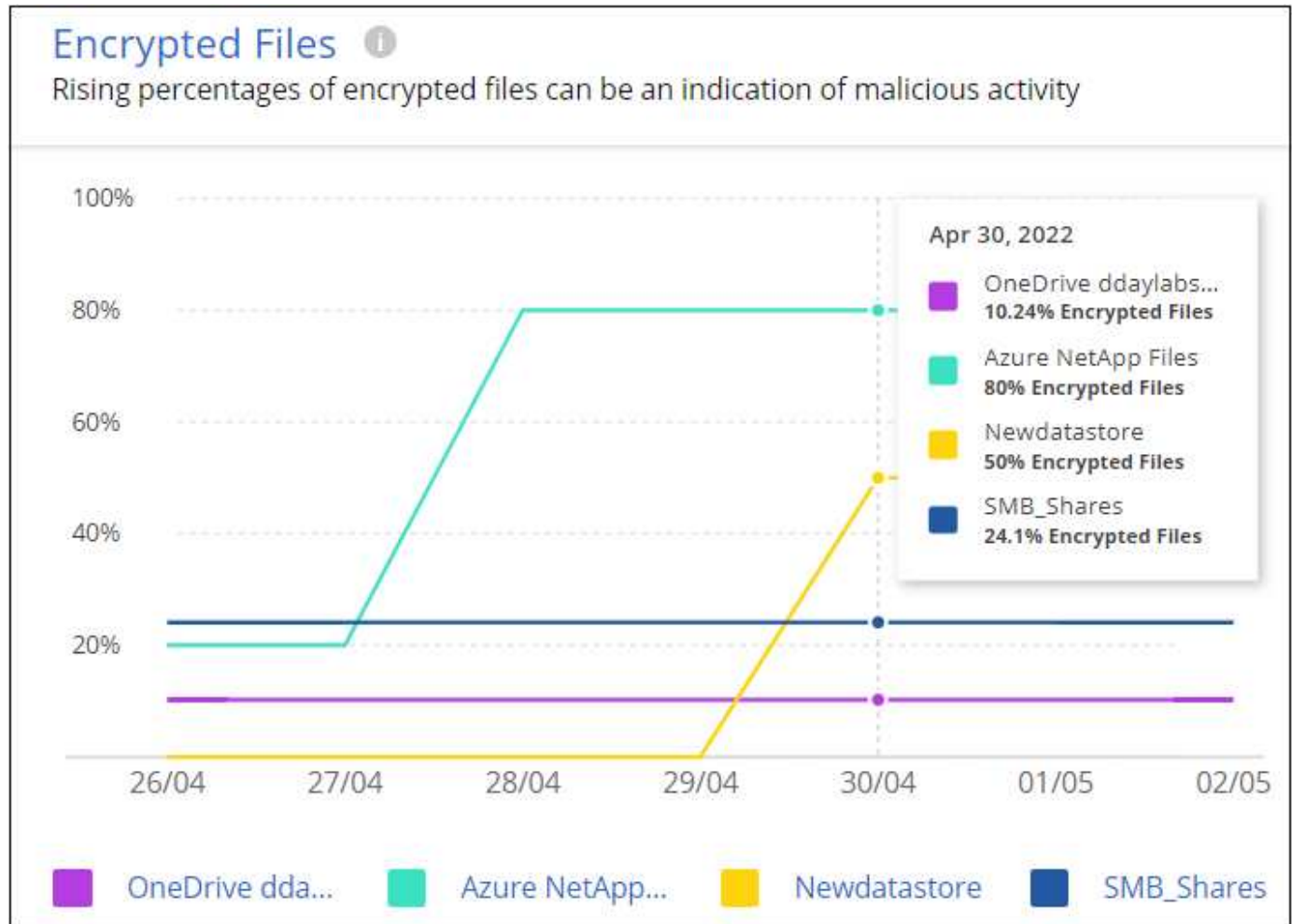
You can hover over each section to see the percentage and total number of files in each category.

Click each area to view the filtered results in the Data Sense Investigation page so that you can investigate

further.

Data listed by encrypted files

The *Encrypted Files* panel shows the top 4 data sources with the highest percentage of files that are encrypted, over time. These are typically items that have been password protected. It does this by comparing the encryption rates over the past 7 days to see which data sources have a greater than 20% increase. An increase of this amount could mean that ransomware is already attacked your system.



Click a line for one of the data sources to view the filtered results in the Data Sense Investigation page so that you can investigate further.


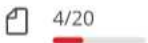




























Status of ONTAP systems hardening

The *Harden your ONTAP environment* panel provides the status of certain settings in your ONTAP systems that track how secure your deployment is according to the [NetApp Security Hardening Guide for ONTAP Systems](#) and to the [ONTAP anti-ransomware feature](#) that proactively detects and warns about abnormal activity.

You can review the recommendations and then decide how you want to address the potential issues. You can follow the steps to change the settings on your clusters, defer the changes to another time, or ignore the suggestion.

This panel supports on-prem ONTAP, Cloud Volumes ONTAP, and Amazon FSx for NetApp ONTAP systems at

this time.

Harden your ONTAP environments						
Working Environment	ONTAP Anti Ransomware ⓘ	NAS Auditing ⓘ	ONTAP Version ⓘ	Snapshots ⓘ		
MY ONTAP1			 9.10.XX			
ONTAP2			 9.10.XX			
AccOI_ONTAP			 9.10.XX			
CVO828			 9.8.XX			
FSx			 9.8.XX			

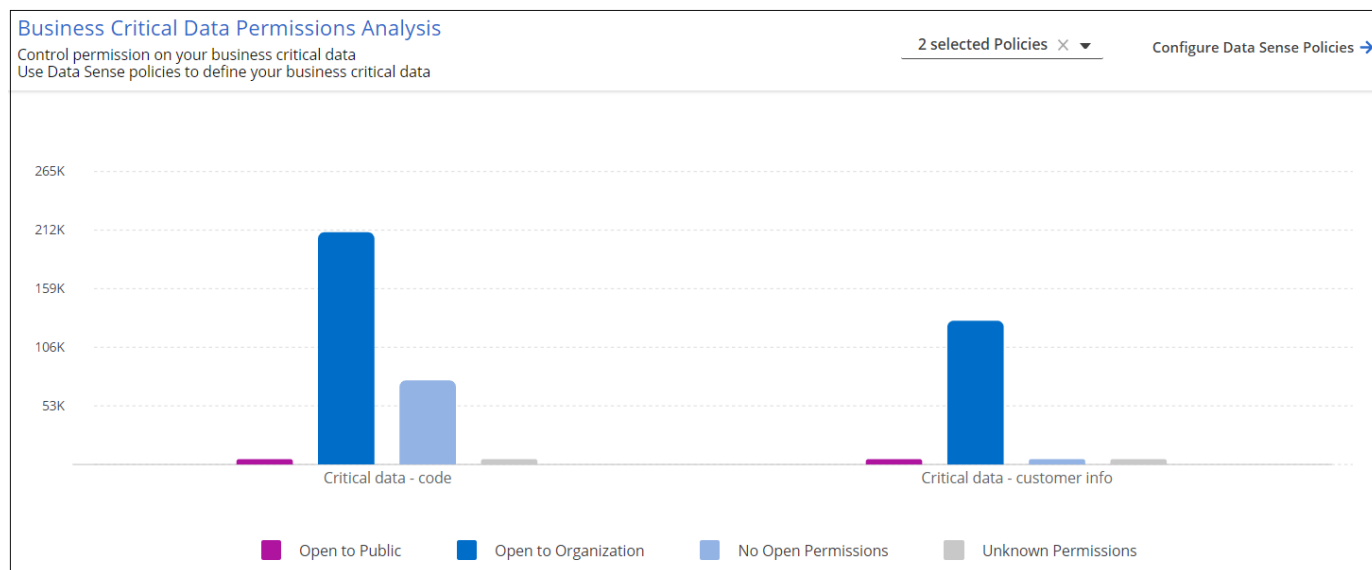
The settings that are being tracked include:

Hardening Objective	Description	Remediation
ONTAP Anti-ransomware	The percentage of volumes that have on-box anti-ransomware activated. Valid for on-prem ONTAP systems only. A green status icon indicates > 85% of volumes are enabled. Yellow indicates 40-85% are enabled. Red indicates < 40% are enabled.	See how to enable anti-ransomware on your volumes using System Manager.
NAS Auditing	The number of storage VMs that have file system auditing enabled. A green status icon indicates > 85% of SVMs have NAS file system auditing enabled. Yellow indicates 40-85% are enabled. Red indicates < 40% are enabled.	See how to enable NAS auditing on SVMs using the CLI.

Hardening Objective	Description	Remediation
ONTAP Version	The version of ONTAP software installed on your clusters. A green status icon indicates that the version is current. A yellow icon indicates that the cluster is behind by 1 or 2 patch versions or 1 minor version for on-prem systems, or behind by 1 major version for Cloud Volumes ONTAP. A red icon indicates that the cluster is behind by 3 patch versions, or 2 minor versions, or 1 major version for on-prem systems, or behind by 2 major versions for Cloud Volumes ONTAP.	See the best way to upgrade your on-prem clusters or your Cloud Volumes ONTAP systems.
Snapshots	Is the snapshot capability activated on data volumes, and what percentage of volumes have Snapshot copies. A green status icon indicates > 85% of volumes have snapshots enabled. Yellow indicates 40-85% are enabled. Red indicates < 40% are enabled.	See how to enable volume snapshots on your on-prem clusters, or on your Cloud Volumes ONTAP systems, or on your FSx for ONTAP systems.

Status of permissions on your critical business data

The *Business critical data permissions analysis* panel shows the permissions status of data that is critical for your business. That way you can quickly assess how well you are protecting your business critical data.



Initially this panel shows data based on default policies that we have selected. But you can select the 2 most important Data Sense *Policies* that you have created to view your most critical business data. See how to [create your policies using Data Sense](#).

The graph shows permission analysis of all the data that meets the criteria from your policies. It lists the number of items that are:

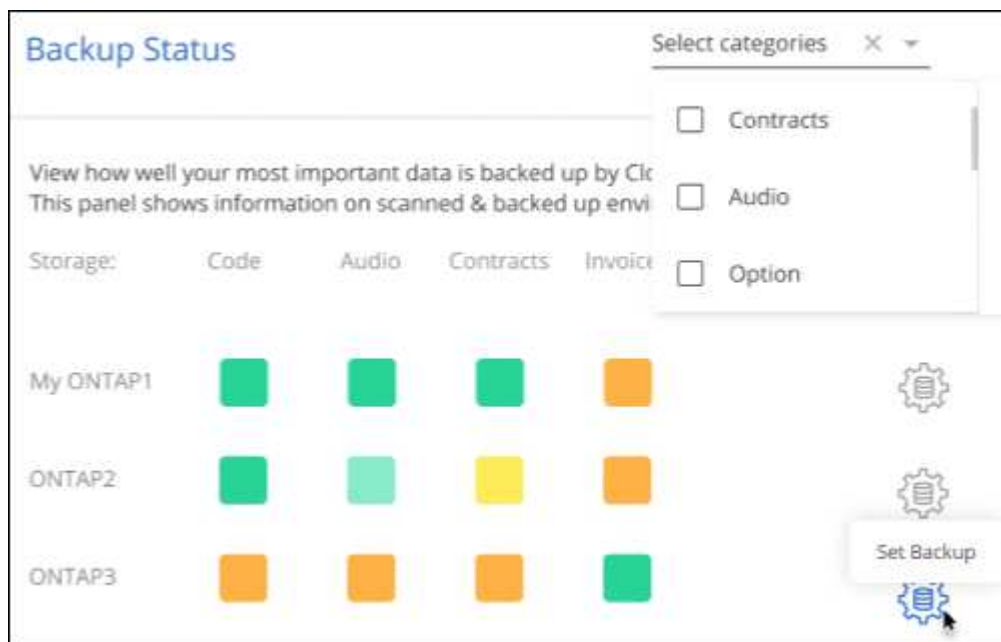
- Open to public permissions – the items which Data Sense considers as open to public
- Open to organization permissions – the items which Data Sense considers as open to organization
- No open permissions – the items which Data Sense considers as no open permissions
- Unknown permissions – the items which Data Sense considers as unknown permissions

Hover over each bar in the charts to view the number of results in each category. Click a bar and the Data Sense Investigation page is displayed so you can investigate further about which items have open permissions and whether you should make any adjustments to file permissions.

Backup status of your critical business data

The *Backup Status* panel shows how different categories of data are being protected using Cloud Backup. This identifies how comprehensively your most important categories of data are backed up in case you need to recover because of a ransomware attack. This data is a visual representation of how many items of a specific category in a working environment are backed up.

Only on-prem ONTAP and Cloud Volumes ONTAP working environments that are already being backed up using Cloud Backup *and* scanned using Cloud Data Sense will appear in this panel.



Initially this panel shows data based on default categories that we have selected. But you can select the categories of data that you want to track; for example, codes files, contracts, etc. See the full list of [categories](#) that are available from Cloud Data Sense for your working environments. Then select up to 4 categories.

After the data is populated, hover over each square in the charts to view the number of files that are backed up out of all files in the same category in the working environment. A green square means 85% or greater of your files are being backed up. A yellow square means between 40% and 85% of your files are being backed up. And a red square means 40% or fewer files are being backed up.

You can click the Cloud Backup button at the end of the row to go to the Cloud Backup interface to enable backup on more volumes in each working environment.

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.