



Step 1 of 3: Define basics

StorageGRID

NetApp
May 17, 2022

Table of Contents

Step 1 of 3: Define basics	1
Use advanced filters in ILM rules	2

Step 1 of 3: Define basics

Step 1 (Define Basics) of the Create ILM Rule wizard allows you to define the rule's basic and advanced filters.

About this task

When evaluating an object against an ILM rule, StorageGRID compares the object metadata to the rule's filters. If the object metadata matches all filters, StorageGRID uses the rule to place the object. You can design a rule to apply to all objects, or you can specify basic filters, such as one or more tenant accounts or bucket names, or advanced filters, such as the object's size or user metadata.

Create ILM Rule Step 1 of 3: Define Basics

Name

Description

Tenant Accounts (optional)

Select tenant accounts or enter tenant IDs

Bucket Name

matches all

Value

[Advanced filtering...](#) (0 defined)

Cancel

Next

Steps

1. Enter a unique name for the rule in the **Name** field.

You must enter between 1 and 64 characters.

2. Optionally, enter a short description for the rule in the **Description** field.

You should describe the rule's purpose or function so you can recognize the rule later.

Name

Make 3 Copies

Description

Save 1 copy at 3 sites for 1 year. Then, save EC copy forever

3. Optionally, select one or more S3 or Swift tenant accounts to which this rule applies. If this rule applies to all tenants, leave this field blank.

If you do not have either the Root access permission or the Tenant accounts permission, you cannot select tenants from the list. Instead, enter the tenant ID or enter multiple IDs as a comma-delimited string.

4. Optionally, specify the S3 buckets or Swift containers to which this rule applies.

If **matches all** is selected (default), the rule applies to all S3 buckets or Swift containers.

5. Optionally, select **Advanced filtering** to specify additional filters.

If you do not configure advanced filtering, the rule applies to all objects that match the basic filters.

If this rule will create erasure-coded copies, add the **Object Size (MB)** advanced filter and set it to **greater than 1**. The size filter ensures that objects that are 1 MB or smaller will not be erasure coded.



Erasure coding is best suited for objects greater than 1 MB. Do not use erasure coding for objects smaller than 200 KB to avoid the overhead of managing very small erasure-coded fragments.

6. Select **Next**.

Step 2 (Define Placements) appears.

Related information

- [What an ILM rule is](#)
- [Use advanced filters in ILM rules](#)
- [Step 2 of 3: Define placements](#)

Use advanced filters in ILM rules

Advanced filtering allows you to create ILM rules that apply only to specific objects based on their metadata. When you set up advanced filtering for a rule, you select the type of metadata you want to match, select an operator, and specify a metadata value. When objects are evaluated, the ILM rule is applied only to those objects that have metadata matching the advanced filter.

The table shows the types of metadata you can specify in advanced filters, the operators you can use for each type of metadata, and the metadata values expected.

Metadata type	Supported operators	Metadata value
Ingest Time (microseconds)	<ul style="list-style-type: none">• equals• does not equal• less than• less than or equals• greater than• greater than or equals	<p>Time and date the object was ingested.</p> <p>Note: To avoid resource issues when activating a new ILM policy, you can use the Ingest Time advanced filter in any rule that might change the location of large numbers of existing objects. Set Ingest Time to be greater than or equal to the approximate time when the new policy will go into effect to ensure that existing objects are not moved unnecessarily.</p>

Metadata type	Supported operators	Metadata value
Key	<ul style="list-style-type: none"> • equals • does not equal • contains • does not contain • starts with • does not start with • ends with • does not end with 	<p>All or part of a unique S3 or Swift object key.</p> <p>For example, you might want to match objects that end with <code>.txt</code> or start with <code>test-object/</code>.</p>
Last Access Time (microseconds)	<ul style="list-style-type: none"> • equals • does not equal • less than • less than or equals • greater than • greater than or equals • exists • does not exist 	<p>Time and date the object was last retrieved (read or viewed).</p> <p>Note: If you plan to use last access time as an advanced filter, Last Access Time updates must be enabled for the S3 bucket or Swift container.</p> <p>Use Last Access Time in ILM rules</p>
Location Constraint (S3 only)	<ul style="list-style-type: none"> • equals • does not equal 	<p>The region where an S3 bucket was created. Use ILM > Regions to define the regions that are shown.</p> <p>Note: A value of <code>us-east-1</code> will match objects in buckets created in the <code>us-east-1</code> region as well as objects in buckets that have no region specified.</p> <p>Configure regions (optional and S3 only)</p>
Object Size (MB)	<ul style="list-style-type: none"> • equals • not equals • less than • less than or equals • greater than • greater than or equals 	<p>The object's size in MB.</p> <p>Erasure coding is best suited for objects greater than 1 MB. Do not use erasure coding for objects smaller than 200 KB to avoid the overhead of managing very small erasure-coded fragments.</p> <p>Note: To filter on object sizes smaller than 1 MB, type in a decimal value. Your browser type and locale settings control whether you need to use a period or a comma as the decimal separator.</p>

Metadata type	Supported operators	Metadata value
User Metadata	<ul style="list-style-type: none"> contains ends with equals exists does not contain does not end with does not equal does not exist does not start with starts with 	<p>Key-value pair, where User Metadata Name is the key and User Metadata Value is the value.</p> <p>For example, to filter on objects that have user metadata of <code>color=blue</code>, specify <code>color</code> for User Metadata Name, <code>equals</code> for the operator, and <code>blue</code> for User Metadata Value.</p> <p>Note: User-metadata names are not case sensitive; user-metadata values are case sensitive.</p>
Object Tag (S3 only)	<ul style="list-style-type: none"> contains ends with equals exists does not contain does not end with does not equal does not exist does not start with starts with 	<p>Key-value pair, where Object Tag Name is the key and Object Tag Value is the value.</p> <p>For example, to filter on objects that have an object tag of <code>Image=True</code>, specify <code>Image</code> for Object Tag Name, <code>equals</code> for the operator, and <code>True</code> for Object Tag Value.</p> <p>Note: Object tag names and object tag values are case sensitive. You must enter these items exactly as they were defined for the object.</p>

Specifying multiple metadata types and values

When you define advanced filtering, you can specify multiple types of metadata and multiple metadata values. For example, if you want a rule to match objects between 10 MB and 100 MB in size, you would select the **Object Size** metadata type and specify two metadata values.







- The first metadata value specifies objects greater than or equal to 10 MB.
- The second metadata value specifies objects less than or equal to 100 MB.

Advanced Filtering

Use advanced filtering if you want a rule to apply only to specific objects. You can filter objects based on their system metadata, user metadata, or object tags (S3 only). When objects are evaluated, the rule is applied if the object's metadata matches the criteria in the advanced filter.

Objects between 10 and 100 MB

Matches all of the following metadata:

Object Size (MB)	greater than or equals	10		
Object Size (MB)	less than or equals	100		
 				

Cancel

Remove Filters

Save

Using multiple entries allows you to have precise control over which objects are matched. In the following example, the rule applies to objects that have a Brand A or Brand B as the value of the camera_type user metadata. However, the rule only applies to those Brand B objects that are smaller than 10 MB.

Advanced Filtering

Use advanced filtering if you want a rule to apply only to specific objects. You can filter objects based on their system metadata, user metadata, or object tags (S3 only). When objects are evaluated, the rule is applied if the object's metadata matches the criteria in the advanced filter.

Multiple filters

Matches all of the following metadata:

User Metadata	▼	camera_type	equals	▼	Brand A	+	×
+							×

Or matches all of the following metadata:

User Metadata	▼	camera_type	equals	▼	Brand B	+	×	
Object Size (MB)	▼		less than or equals	▼	10			
							+	×
							+	×

Cancel

Remove Filters

Save

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.