Isilon
OneFS
Version 7.1

Platform API Reference

EMC²

For the most up-to-date regulatory document for your product line, go to EMC Online Support (https://support.emc.com). For documentation on EMC Data Domain products, go to the EMC Data Domain Support Portal (https://my.datadomain.com).

CONTENTS

Chapter 5   Auditing resources   61

Chapter 6   NFS resources   65

Chapter 7   SMB resources   81

CHAPTER 1

Introduction to this guide

This section contains the following topics:

About this guide

This guide describes how the Isilon OneFS Platform API provides access to cluster configuration, management, and monitoring functionality. This guide also provides a list of all available API resource URLs, HTTP methods, and object descriptions.

Isilon scale-out NAS overview

The EMC Isilon scale-out NAS storage platform combines modular hardware with unified software to harness unstructured data. Powered by the distributed OneFS operating system, an EMC Isilon cluster delivers a scalable pool of storage with a global namespace.

The platform's unified software provides centralized web-based and command-line administration to manage the following features:

◆ A symmetrical cluster that runs a distributed file system

◆ Scale-out nodes that add capacity and performance

◆ Storage options that manage files, block data, and tiering

◆ Flexible data protection and high availability

◆ Software modules that control costs and optimize resources

Where to go for support

You can contact EMC Isilon Technical Support for any questions about EMC Isilon products.

Online Support	Live Chat
	Create a Service Request
Telephone Support	United States: 800-782-4362 (1-800-SVC-4EMC)
	Canada: 800-543-4782
	Worldwide: +1-508-497-7901
	For local phone numbers in your country, see EMC Customer Support Centers.
Help with online support	For questions specific to EMC Online Support registration or access, email support@emc.com.

CHAPTER 2

Introduction to the Platform API

This section contains the following topics:

Platform API overview

You can access cluster configuration, management, and monitoring functionality through the OneFS Platform API.

It is recommended that you have a solid understanding of HTTP/1.1 and experience writing HTTP-based client software before you implement client-based software through the Platform API, which is an HTTP-based interface.

API architecture

You can access system configuration and status information through objects and collections of objects. These objects and collections are exposed as resource URIs, which are represented as JavaScript Object Notation (JSON) formatted documents.

You can access the Platform API through a Representational State Transfer (REST) interface, which is composed of URIs and standard HTTP methods.

The following table defines terms that are relevant to the Platform API.

Object	An object is system configuration data that is created by users, or an object is a global setting on the system.
	For example, a user-created object can be a file system snapshot, quota, share, export, block storage target, logical unit, sync policy, and so on.
	An object can also be a global setting on the system, such as default share settings, HTTP server settings, snapshot subsystem settings, and so on.
Collection	A collection is a group of objects of a similar type. For example, all of the user-defined quotas in the system make up a collection of quotas.
Resource	A resource is an object, collection, or function that you can access by a URI.
Namespace	The namespace is the file system structure on the cluster.

HTTP methods

You can implement only the HTTP methods defined by RFC 2616, with the following exceptions:

- ◆ The GET method returns an object or collection.
- ◆ The DELETE method removes an object from a collection.
- ◆ The POST method creates objects.
- ◆ The POST method returns a document indicating the success of the request and the location of the created resource.
- ◆ The PUT method enables partial modification of a resource.
- ◆ The PUT and POST methods do not return full resource entity bodies upon success; these methods return success or failure codes.

Collection patterns

You can configure a cluster through the Platform API by applying HTTP methods to resource URIs according to a set of collection patterns.

Note

◆ The Platform API supports a maximum URI length of 8,198 characters.

◆ When making multiple changes through the Platform API, it is recommended that you send all requests to a single node to avoid configuration collisions.

Platform API resources are available under a top-level URI path on all of the nodes in a cluster. You can access resources with a URI with the following pattern.

```
https://<cluster-ip-or-host-name>:<port>/<resource-uri>
```

The ‹resource-uri› is composed of a ‹resource-version›, the ‹namespace›, and the type of collection pattern such as ‹object-id› or ‹collection--name›/‹object-id›.

For example, to access all the SMB shares on a cluster, go to the following URI:

```
https://192.168.1.100:8080/platform/1/protocols/smb/shares
```

Read a system object

You can read a system object that has a unique identifier through the GET method; the identifier is the name or system-generated id for that object.

Request pattern:

```
GET https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<object-id>
```

Response:

```
Content-Type: application/json
{
"<object>": {
        "<property>": <value>,
        ...
        }
}
```

Modify a system object

You can modify an object by sending one or more of the object properties through the PUT method. Only the specified properties are modified on the resource, which leaves all other properties in their current state.

Request pattern:

```
PUT https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<object-id>
Content-Type: application/json
{
        "<property>": <value>
        ...
}
```

Response:

```
{Standard JSON success or error response}
```

Read an entire collection

You can read all of the objects in a collection through the GET method.

Request pattern:

```
GET https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>
```

Response:

```
Content-Type: application/json
{
    "<collection>": [
            "<property>": <value>
            ...
            ]
}
```

Read an object from a collection

You can read an object in a collection through the GET method.

Request pattern:

```
GET https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>/<object-id>
```

Response:

```
Content-Type: application/json

{
        "<collection>": [
                "<property>": <value>
                ...
                ]
}
```

Create an object in a collection

You can create a user object in a collection through the POST method. The system responds with the final URI where the new object is located.

Request pattern:

```
POST https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>
Content-Type: application/json
{
        "<property>": <value>,
        ...
}
```

Response:

```
Location: https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>/<new-object-id>

Content-Type: application/json

{Standard JSON success or error response}
```

Modify an object in a collection

You can modify an object in a collection through the PUT method.

Request pattern:

```
PUT https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>/<object-id>
```

```
Content-Type: application/json
{
        "parameter_name": <value>
        ...
}
```

Response:
```
{Standard JSON success or error response}
```

Delete an object from a collection

You can delete a user object from a collection through the DELETE method.

Request pattern:
```
DELETE https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>/<object-id>
```

Response:
```
{Standard JSON success or error response}
```

Filter a collection

You can apply a filter to a collection to retrieve user objects that match some common criteria.

Request pattern:
```
GET https://<cluster-ip-or-host-name>:<port>/<resource-version>/
<namespace>/<collection-name>?<parameter_name>=<match-pattern>&...
```

Response:
```
Content-Type: application/json
{
"count": <integer>,
"<collection-name>": [
            {
                "<parameter-name>":
    <matched-value>,
                ...
            },
            ...
        ]
}
```

Platform API self-documentation

You can access detailed self-documentation about Platform API resources, including URI descriptions, query arguments, allowable HTTP methods, and the request and response JSON representation structures.

You can access the Platform API self-documentation by sending a GET request to any resource URI with the describe query parameter appended to the end of the URI.

For example, to obtain self-documentation for the quotas resource, send the following request:
```
GET https://<cluster-ip-or-host-name>:<port>/platform/1/quota/quotas?
describe
```

You can retrieve a list of all of the resources for a feature by appending the list and all options to the describe query parameter. The content is returned as mime-type text/plain.

For example, to return a list of all resource paths for snapshots, send the following request:

```
GET https://<cluster-ip-or-host-name>:<port>/platform/1/snapshot/
snapshots?describe&list&all
```

```
HTTP_RESULT 200
{
    "directory": [
        "/1/snapshot/snapshots/<SID>",
        "/1/snapshot/snapshots/<SID>/locks",
        "/1/snapshot/snapshots/<SID>/locks/<LID>"
    ]
}
```

You can retrieve the JSON-formatted documents that are included in the self-documentation by sending a GET request to any resource URI with the query parameters `describe` and `json` appended to the end of the URI. This content is returned as mime-type application/json.

For example, to obtain the JSON-formatted document for the quotas resource, send the following request:

```
GET https://<cluster-ip-or-host-name>:<port>/platform/1/quota/quotas?
describe&json
```

If you include any values for either the `describe` or `json` parameters, the values are ignored.

API authentication

You can access API resources by establishing a session with a cookie or through HTTP Basic Authentication. You can only access resources for which you have privileges.

You can establish a session by creating a session cookie through the session resource. HTTP Basic Authentication requires more system processing resources and is slower than authentication with a session cookie. If you want to initiate multiple requests over a period of time, it is recommended that you create a session cookie.

HTTP Basic Authentication

With HTTP Basic Authentication (RFC 2617), you can create a standard Authorization header with a valid username and password and send your request to the server. If your username and password are authenticated by the server, you can access the resource.

The following example shows a sample HTTP Basic Authentication request.

```
GET https://<cluster-ip-or-host-name>:<port>/<resource_uri> HTTP/1.1
Authorization: Basic QWxhZGRpbjpvcGVuIHN1c2FtZQ==
```

Session cookies

You can establish a session by creating a session cookie through the session resource.

You can create a session cookie by sending credentials to a session service resource, which responds with a Set-Cookie header. The Set-Cookie header contains an authentication token that can then be sent with subsequent requests to provide immediate authentication.

CHAPTER 3

Session resources

This section contains the following topics:

Session resource overview

You can set a session cookie for extended authentication on a single node.

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
username	String	Specifies the username requesting access to the cluster.	N/A
password	String	Specifies the password for the username requesting access to the cluster.	N/A
services	Array	Specifies a list of services to obtain access to.	N/A
timeout_absolute	Integer	Specifies the number of seconds before the session expires.	N/A
timeout_inactive	Integer	Specifies the number of seconds of inactivity before the session expires.	N/A

Create a session

You can authenticate to the API by creating a session cookie and a session. When you create a session, you extend your authentication to a node for multiple requests over a period of time.

Session cookies are specific to a single node; all requests must be made to the same node from which the session cookie is obtained.

Procedure

1. Send a POST request to /session/1/session by typing the JSON content-type in the request header and by typing your username, password, and the service you want to access in the request body. Specify the `services` parameter as `platform` for system configuration or `namespace` for file system access.

```
Content-type: application/json
Body:
{
"username": "<string>",
"password": "<string>",
"services": ["platform" | "namespace"]
}
```

   If the server validates your username and password, a Set-Cookie header is returned.

2. Obtain the `isisessid` value from the Set-Cookie header.

```
201 Created
Content-Length:104
Content-Type:application/json
Date:Fri, 22 Feb 2013 19:08:36 GMT
Set-Cookie:isisessid=12345678-abcd-1234-abcd-1234567890ab; path=/;
HttpOnly; Secure
Response Body:
{
```

```
"services":[
"platform",
"namespace"
],
"timeout_absolute":14400,
"timeout_inactive":900,
"username":"user123"
}
```

This value will authenticate the session when you send a request with a session cookie.

Results

A session is created on the node on which the POST request was executed.

Send a request for access with a session cookie

Authenticate to a session with a session cookie.

Before you begin

Create a session and obtain an `isisessid` value from the Set-Cookie header.

You do not need to specify a WWW-AUTHENTICATE header.

Procedure

1. Send a GET request to any API resource by typing the isisessid value in the request header.

   If the server validates your username and password, access is granted.

Results

Authentication is granted for future requests on this node.

Request example
```
GET 10.10.111.120:8080/platform/1/quotas
Cookie: isisessid=12345678-abcd-1234-abcd-1234567890ab
```
Response example
```
200 OK
Content-Type:application/json
{
//JSON content
}
```

Get information about the current session

You can send a GET request to obtain information about the current session. If the server validates your username and password, the system returns the JSON document used to create the session. If the server does not validate the credentials, the server returns with an error message.

Request syntax

```
GET /session/1/session
```

Response body

If authorization is successful:

```
"username": <string>
"services": [<string>, ...]
"timeout_absolute": <integer>,
"timeout_inactive": <integer>

{
   "services":[
      "platform",
```

```
        "namespace"
    ],
    "timeout_absolute":14396,
    "timeout_inactive":900,
    "username":"<string>"
}
```

If authorization fails:

```
401 Unauthorized
Content-Type: application/json
{
    "errors":[
        {
            "message":"authorization required"
        }
    ]
}
```

Log out of a session

If you no longer need to stay authenticated to a node, you can log out of a session by deleting the session cookie. Session cookies are configured to expire automatically after a period of inactivity, by default 900 seconds, or after an absolute period of time, by default 14400 seconds. If the server validates the credentials, the session cookie is no longer valid for future requests and the session cookie is deleted on the client. If the server does not validate the credentials, the server returns an error message.

Request syntax

```
DELETE /session/1/session
```

Response body
If authorization is successful:

```
204 No Content
Set-Cookie:isisessid=deleted; path=/; Expires=Thu, 01-Jan-1970
00:00:01 GMT; HttpOnly; Secure
Content-Length: 0
```

If authorization fails:

```
401 Unauthorized
Content-Type: application/json
{
    "errors":[
        {
            "message":"authorization required"
        }
    ]
}
```

CHAPTER 4

Authentication resources

This section contains the following topics:

Authentication and access control overview

OneFS supports several methods for ensuring that your cluster remains secure, including UNIX- and Windows-style permissions for data-level access control. Access zones and role-based administration control access to system configuration settings.

OneFS is designed for a mixed environment that allows you to configure both Windows Access Control Lists (ACLs) and standard UNIX permissions on the cluster file system. Windows and UNIX permissions cannot coexist on a single file or directory. However, OneFS uses identity mapping between Windows and UNIX permissions.

Note

In most situations, the default settings are sufficient. You can configure additional access zones, custom roles, and permissions policies as necessary for your particular environment.

Authentication resources

You can retrieve, create, modify, or delete authentication providers, users, groups, and other configurations and settings.

Auth access token resource

Retrieves information about the access token for the authenticated user. Only the user or the root administrator can retrieve this information.

Operation	Method and URI
Get the security token for the currently authenticated user	`GET /platform/1/auth/id`
View the detailed JSON schema for this resource	`GET /platform/1/auth/id? describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
additional_id	Object	Specifies properties for an additional ID.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	additional_id
name	String	Specifies the persona name, which must be combined with a type.	additional_id
type	String	Specifies the type of persona, which must be combined with a name.	additional_id

Property	Type	Description	Property of
gid	Object	Specifies properties for the currently authenticated primary group ID for the user.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	gid
name	String	Specifies the persona name, which must be combined with a type.	gid
type	String	Specifies the type of persona, which must be combined with a name.	gid
group_sid	Object	Specifies properties for the currently authenticated primary group security ID for the user.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	group_sid
name	String	Specifies the persona name, which must be combined with a type.	group_sid
type	String	Specifies the type of persona, which must be combined with a name.	group_sid
ifs_restricted	Boolean	Indicates if this user has restricted access to the /ifs file system.	ntoken
local_address	String	Specifies the IP address of the node that is servicing the request.	ntoken
on_disk_group_id	Object	Specifies properties for the group ID that is stored on disk for the authenticated user.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	on_disk_group_id
name	String	Specifies the persona name, which must be combined with a type.	on_disk_group_id
type	String	Specifies the type of persona, which must be combined with a name.	on_disk_group_id
on_disk_user_id	Object	Specifies properties for the user ID that is stored on disk for the authenticated user.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	on_disk_user_id

Property	Type	Description	Property of
name	String	Specifies the persona name, which must be combined with a type.	on_disk_user_id
type	String	Specifies the type of persona, which must be combined with a name.	on_disk_user_id
privilege	Object	Specifies for the privileges granted to the authenticated user.	ntoken
id	String	Specifies the ID of the privilege.	privilege
name	String	Specifies the name of the privilege.	privilege
read-only	Boolean	Indicates if the privilege is read-only.	privilege
protocol	Integer	Specifies the protocol that is responsible for the creation of the token, such as NFS or FTP.	ntoken
remote_address	String	Specifies the IP address of the client requesting the information.	ntoken
uid	Object	Specifies properties for the currently authenticated user ID.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	uid
name	String	Specifies the persona name, which must be combined with a type.	uid
type	String	Specifies the type of persona, which must be combined with a name.	uid
user_sid	Object	Specifies properties for the currently authenticated security ID for the user.	ntoken
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	user_sid
name	String	Specifies the persona name, which must be combined with a type.	user_sid
type	String	Specifies the type of persona, which must be combined with a name.	user_sid
zid	Integer	Specifies the zone ID that is serving the request.	ntoken
zone_id	String	Specifies the name of the zone that is serving the request.	ntoken

Auth users resource

You can apply the following HTTP methods to create, modify, delete, or retrieve information about users that are authenticated through a local or remote authentication provider.

Operation	Method and URI
Get all users	`GET /platform/1/auth/users`
Get one user	`GET /platform/1/auth/users/<user-id>`
Modify a user	`PUT /platform/1/auth/users/<user-id>`
Create a user	`POST /platform/1/auth/users`
Flush the users cache	`DELETE /platform/1/auth/users`
Delete a user	`DELETE /platform/1/auth/users/<user-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/users?describe`

Query parameters

cached=‹Boolean›

If true, only return cached objects.

domain=‹string›

Filter users by domain.

filter=‹string›

Filter users by name prefix.

provider=‹string›

Filter users by provider.

query_member_of=‹Boolean›

Enumerate all users that a group is a member of.

resolve_names=‹Boolean›

Resolve names of personas.

zone=‹string›

Filter users by zone.

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from the previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of users.	N/A

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
dn	String	Specifies the distinguished name for the user.	users
dns_domain	String	Specifies the DNS domain of the object.	users
domain	String	Specifies the domain of the group.	users
email	String	Specifies an email address.	users
enabled	Boolean	True if the user is enabled.	users
expired	Boolean	True if the password for the user has expired.	users
expiry	Integer	Specifies the alternative name to create for each snapshot.	users
gecos	String	Specifies the GECOS value, which is usually the full name.	users
generated_gid	Boolean	Indicates if the GID was generated.	users
generated_uid	Boolean	Indicates if the UID was generated.	users
gid	Object	Specifies properties for the group ID.	users
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	gid
name	String	Specifies the persona name, which must be combined with a type.	gid
type	String	Specifies the type of persona, which must be combined with a name.	gid
home_directory	String	Specifies the home directory for the user.	users
id	String	Specifies the system ID given to the user or group. In a POST request, this value is the ID that refers to the item in the collection item resource path.	users
locked	Boolean	Specifies if the account is locked.	users
max_password_age	Integer	Specifies the maximum age in seconds allowed for the password before the password expires.	users
member_of	Object	Specifies properties for groups that this user or group are members of.	users
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	member_of

Property	Type	Description	Property of
name	String	Specifies the persona name, which must be combined with a type.	member_of
type	String	Specifies the type of persona, which must be combined with a name.	member_of
name	String	Specifies a user or group name.	users
password_expired	Boolean	Specifies whether the password has expired.	users
password_expires	Boolean	Specifies whether the password is allowed to expire.	users
password_last_set	Integer	Specifies the last time the password was set.	users
primary_group_sid	Object	Specifies properties for the security ID of the primary group for the user.	users
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	primary_group_sid
name	String	Specifies the persona name, which must be combined with a type.	primary_group_sid
type	String	Specifies the type of persona, which must be combined with a name.	primary_group_sid
prompt_password_change	Boolean	Prompts a password change for the user at the next log in.	users
provider	String	Specifies an authentication provider.	users
sam_account_name	String	Specifies a user or group name.	users
shell	String	Specifies the path to the shell for the user.	users
sid	Object	Specifies properties for the security identifier.	users
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	sid
name	String	Specifies the persona name, which must be combined with a type.	sid
type	String	Specifies the type of persona, which must be combined with a name.	sid
type	String	Indicates the object type.	users
uid	Object	Specifies properties for the user ID.	users
id	String	Specifies the serialized form of the persona (such as 'UID:0',	uid

Property	Type	Description	Property of
		'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	
name	String	Specifies the persona name, which must be combined with a type.	uid
type	String	Specifies the type of persona, which must be combined with a name.	uid
upn	String	Specifies the principal name for the user.	users
user_can_change_password	Boolean	Specifies whether the password for the user can be changed.	users

Auth users member of resource

Applies the standard collection pattern to groups that a user is a member of.

Operation	Method and URI
Get the groups that a user is a member of	`GET /platform/1/auth/users/<user-id>/member_of`
Add a group membership for a user	`POST /platform/1/auth/users/<user-id>/member_of`
Remove a group membership from a user	`DELETE /platform/1/auth/users/<user-id>/member_of/<persona-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/users/<user-id>/member_of?describe`

Query parameters

provider=‹string›

Filters groups by provider.

resolve_names=‹Boolean›

Resolves the names of personas.

zone=‹string›

Filters groups by zone.

resume=‹string›

Continues returning results from the previous call (cannot be used with other options).

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
member_of	Object	Specifies properties for groups that this user or group are members of.	N/A

Property	Type	Description	Property of
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	member_of
name	String	Specifies the persona name, which must be combined with a type.	member_of
type	String	Specifies the type of persona, which must be combined with a name.	member_of

Auth groups resource

Applies the standard collection pattern to groups.

Operation	Method and URI
Get all groups	GET /platform/1/auth/groups
Flush the groups cache	DELETE /platform/1/auth/groups
Get a group	GET /platform/1/auth/groups/<group-id>
Create a group	POST /platform/1/auth/groups
Modify a group	PUT /platform/1/auth/groups/<group-id>
Delete a group	DELETE /platform/1/auth/groups/<group-id>
View the detailed JSON schema for this resource	GET /platform/1/auth/groups?describe

Query parameters

cached=‹Boolean›

   If true, only return cached objects.

domain=‹string›

   Filter groups by domain.

filter=‹string›

   Filter groups by name prefix.

provider=‹string›

   Filter groups by provider.

query_member_of=‹Boolean›

   Enumerate all groups that a group is a member of.

resolve_names=‹Boolean›

   Resolve names of a persona.

zone=‹string›

   Filter groups by zone.

limit=‹Integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from the previous request (cannot be used with other parameters).

Object properties

Property	Type	Type	Property of
total	string	Specifies the total number of groups to display.	N/A
resume	string	Specifies the value for the resume argument for continuation requests.	N/A
groups	Object	Specifies properties for groups.	N/A
dn	string	Specifies the distinguished name for the user.	groups
dns_domain	string	Specifies the DNS domain for the object.	groups
domain	string	Specifies the domain of the group.	groups
generated_gid	boolean	Indicates if the GID was generated.	groups
gid	Object	Specifies properties for the persona.	groups
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	gid
name	String	Specifies the persona name, which must be combined with a type.	gid
type	String	Specifies the type of persona, which must be combined with a name.	gid
id	string	Specifies the system ID given to the user or group. In a POST request, this value refers to the item in the collection item resource path.	groups
member_of	Object	Specifies properties for groups that this user or group are members of.	groups
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	member_of
name	String	Specifies the persona name, which must be combined with a type.	member_of
type	String	Specifies the type of persona, which must be combined with a name.	member_of
name	string	Specifies a user or group name.	groups
provider	string	Specifies an authentication provider.	groups
sam_account_name	string	Specifies a user or group name.	groups

Property	Type	Type	Property of
sid	Object	Specifies properties for the security identifier.	groups
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	sid
name	String	Specifies the persona name, which must be combined with a type.	sid
type	String	Specifies the type of persona, which must be combined with a name.	sid
type	string	Indicates the object type.	groups

Auth groups members resource

Applies the standard collection pattern to members of a group.

Operation	Method and URI
Get the members of a group	`GET /platform/1/auth/groups/<group-id>/members`
Add a member to a group	`POST /platform/1/auth/groups/<group-id>/members`
Remove a member from a group	`DELETE /platform/1/auth/groups/<group-id>/members/<persona-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/groups/<group-id>/members?describe`

Query parameters

provider=‹string›

Filter groups by the provider.

resolve_names=‹Boolean›

Resolve the name of a persona.

zone=‹string›

Filter groups by zone.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from the previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	String	Specifies the system ID given to the new member of the group. In a POST request, this value is the ID that refers to the item in the collection item resource path.	N/A
members	Object	Specifies persona properties for users or groups with this role.	N/A
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	members
name	String	Specifies the persona name, which must be combined with a type.	members
type	String	Specifies the type of persona, which must be combined with a name.	members

Auth netgroups resource

Applies the standard collection pattern to individual members of netgroups.

Operation	Method and URI
Get the members of a netgroup	`GET /platform/1/auth/netgroups/` `<netgroup>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/netgroups/` `<netgroup>?describe`

Query parameters

provider=‹string›

Filter users by provider.

recursive=‹Boolean›

Perform recursive searches.

ignore_errors=‹Boolean›

Ignore netgroup errors.

zone=‹string›

Filter users by zone.

Object properties

Property	Type	Description	Property of
domainname	String	Specifies the domain for which the netgroup is valid.	netgroups
hostname	String	Specifies the host that is valid for this netgroup.	netgroups
netgroup	String	Specifies the name of the netgroup.	netgroups

Property	Type	Description	Property of
username	String	Specifies the user who is valid for this netgroup.	netgroups

Auth mapping users rules resource

Retrieves the rules for user mapping.

Operation	Method and URI
Get the user mapping rules	`GET /platform/1/auth/mapping/users/ rules`
Replace all user mapping rules	`PUT /platform/1/auth/mapping/users/ rules`
View the detailed JSON schema for this resource	`GET /platform/1/auth/mapping/users/ rules?describe`

Query parameters

zone=‹string›

The zone that the rules apply to.

Object properties

Property	Type	Description	Property of
default_unix_user	Object	Specifies the properties for a default UNIX user. Requires a token to have both a primary UID and GID.	rules
domain	Integer	Specifies the domain name.	default_unix _user
user	String	Specifies the user name for the domain.	default_unix _user
options	Object	Specifies the properties for options.	rules
break	Boolean	Stops processing further rules and immediately creates a final token if a rule is applied successfully.	options
default_user	Object	Substitutes this user if the second user in a rule is not found.	options
domain	Integer	Specifies the domain name.	default_user
user	String	Specifies the user name for the domain.	default_user
group	Boolean	Specifies that the primary GID and primary group SID are copied to the existing credential.	options
groups	Object	Specifies that all additional identifies are copied to the existing credential.	options

Property	Type	Description	Property of
domain	Integer	Specifies the domain name.	groups
user	String	Specifies the user name for the domain.	groups
user	Object	Maps users in the format of domain \user(n), where n is the user number. For example, user1.	options
domain	Integer	Specifies the domain name.	user
user	String	Specifies the user name for the domain.	user
user1	Object	Specifies the properties for the primary user.	rules
domain	Integer	Specifies the domain name.	user1
user	String	Specifies the user name for the domain.	user1
user2	Object	Specifies the properties for the secondary user.	rules
domain	Integer	Specifies the domain name.	user2
user	String	Specifies the user name for the domain.	user2

Auth mapping users lookup resource

Enables user look ups.

Operation	Method and URI
Lookup a user through the user mapper	`GET /platform/1/auth/mapping/users/lookup`
View the detailed JSON schema for this resource	`GET /platform/1/auth/mapping/users/lookup?describe`

Query parameters

user=‹string›

The user to lookup.

zone=‹string›

The name of the zone that is serving the request.

uid=‹integer›

The system generated user ID.

gid=‹integer›

The system generated group ID.

primary_gid=‹integer›

The primary group ID.

Object properties

Property	Type	Description	Property of
dn	String	Specifies the distinguished name for the user.	mapping
dns_domain	String	Specifies the DNS domain of the object.	mapping
domain	String	Specifies the domain of the group.	mapping
email	String	Specifies an email address.	mapping
enabled	Boolean	True if the user is enabled.	mapping
expired	Boolean	True if the password for the user has expired.	mapping
expiry	Integer	Specifies the alternative name to create for each snapshot.	mapping
gecos	String	Specifies the GECOS value, which is usually the full name.	mapping
generated_gid	Boolean	Indicates if the GID was generated.	mapping
generated_uid	Boolean	Indicates if the UID was generated.	mapping
gid	Object	Specifies properties for the group ID.	mapping
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	gid
name	String	Specifies the persona name, which must be combined with a type.	gid
type	String	Specifies the type of persona, which must be combined with a name.	gid
home_directory	String	Specifies the home directory for the user.	mapping
id	String	Specifies the system ID given to the user or group. In a POST request, this value is the ID that refers to the item in the collection item resource path.	mapping
locked	Boolean	Specifies if the account is locked.	mapping
max_password_age	Integer	Specifies the maximum age in seconds allowed for the password before the password expires.	mapping
member_of	Object	Specifies properties for groups that this user or group are members of.	mapping
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	member_of

Property	Type	Description	Property of
name	String	Specifies the persona name, which must be combined with a type.	member_of
type	String	Specifies the type of persona, which must be combined with a name.	member_of
name	String	Specifies a user or group name.	mapping
password_expired	Boolean	Specifies whether the password has expired.	mapping
password_expires	Boolean	Specifies whether the password is allowed to expire.	mapping
password_last_set	Integer	Specifies the last time the password was set.	mapping
primary_group_sid	Object	Specifies properties for the security ID of the primary group for the user.	mapping
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	primary_group_sid
name	String	Specifies the persona name, which must be combined with a type.	primary_group_sid
type	String	Specifies the type of persona, which must be combined with a name.	primary_group_sid
prompt_password_change	Boolean	Prompts a password change for the user at the next log in.	mapping
provider	String	Specifies an authentication provider.	mapping
sam_account_name	String	Specifies a user or group name.	mapping
shell	String	Specifies the path to the shell for the user.	mapping
sid	Object	Specifies properties for the security identifier.	mapping
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	sid
name	String	Specifies the persona name, which must be combined with a type.	sid
type	String	Specifies the type of persona, which must be combined with a name.	sid
type	String	Indicates the object type.	mapping
uid	Object	Specifies properties for the user ID.	mapping
id	String	Specifies the serialized form of the persona (such as 'UID:0',	uid

Property	Type	Description	Property of
		'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	
name	String	Specifies the persona name, which must be combined with a type.	uid
type	String	Specifies the type of persona, which must be combined with a name.	uid
upn	String	Specifies the principal name for the user.	mapping
user_can_change_password	Boolean	Specifies whether the password for the user can be changed.	mapping

Auth providers summary resource

Retrieves summary information for authentication providers.

Operation	Method and URI
Get the authentication providers summary	`GET /platform/1/auth/providers/summary`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/summary?describe`

Query parameters

There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Specifies the ID of the provider.	provider_instances
active_server	String	Specifies the server that the provider serves authentication requests with. Null if no server is set or is not applicable for that provider.	provider_instances
forest	String	Specifies the Active Directory forest. Null if not applicable.	provider_instances
site	String	Specifies the Active Directory site name. Null if not applicable.	provider_instances
name	String	Specifies the name of the provider.	provider_instances
status	String	Indicates the online and active state of the provider.	provider_instances
type	String	Specifies the type of the provider.	provider_instances

Auth ADS providers domains resource

Applies the standard collection pattern to Active Directory service (ADS) domains.

Operation	Method and URI
Get all ADS provider's trusted domains	`GET /platform/1/auth/providers/ads/` `<id>/domains`
Get one ADS provider's trusted domain	`GET /platform/1/auth/providers/ads/` `<id>/domains/<ads-domain>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/ads/` `<id>/domains?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
dc_address	String	Specifies the address for the domain controller.	domains
dc_name	String	Specifies the name for the domain controller.	domains
dc_site	String	Specifies the site for the domain controller.	domains
domain	String	Specifies the name of the domain.	domains
guid	String	Specifies the group and user ID for the domain.	domains
id	String	Specifies a unique identifier for every domain returned.	domains
netbios_name	String	Specifies the NetBIOS name for the domain.	domains
sid	String	Specifies the security ID for the domain.	domains
site	String	Specifies the site for the domain.	domains
status	String	Indicates whether the domain is online or offline.	domains
trust_type	String	Specifies the type of trust with the domain. Options consist of `primary`, `unknown`, `external`, and `forest`.	domains

Auth ADS providers resource

Applies the standard collection pattern to individual Active Directory service (ADS) providers.

Operation	Method and URI
Get all ADS providers	`GET /platform/1/auth/providers/ads`
Get one ADS provider	`GET /platform/1/auth/providers/ads/ <provider-id>`
Join a domain	`POST /platform/1/auth/providers/ads`
Modify an ADS provider	`PUT /platform/1/auth/providers/ads/ <provider-id>`
Leave a domain	`DELETE /platform/1/auth/providers/ads/ <provider-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/ads/ <domain>?describe`

Query parameters

scope=[user|default|effective]

If this parameter is specified as `effective`, or if it is not specified, all fields are shown. If the parameter is specified as `user`, only fields with non-default values are shown. If the parameter is specified as `default`, the default values are returned.

Object properties

Property	Type	Description	Property of
allocate_gids	Boolean	Allocates a GID for an unmapped ADS group. Active Directory groups without GIDs can be proactively assigned a GID by the ID mapper. If this option is disabled, GIDs are not proactively assigned, but when a user's primary group does not include a GID, the system may allocate one.	ads
allocate_uids	Boolean	Enables allocation of a UID for an unmapped ADS user. Active Directory users without UIDs can be proactively assigned a UID by the ID mapper. If this option is disabled, UIDs are not proactively assigned, but when a user's identity does not include a UID, the system may allocate one.	ads
assume_default_domain	Boolean	Enables lookup of unqualified user names in the primary domain.	ads
authentication	Boolean	Enables use of the provider for authentication and identity.	ads

Property	Type	Description	Property of
check_online_interval	Integer	Specifies the time between provider online checks.	ads
controller_time	Integer	Specifies the current time of the domain controller.	ads
create_home_directory	Boolean	Creates a home directory on the first login.	ads
domain_offline_alerts	Boolean	Sends an alert when the domain goes offline.	ads
forest	String	Specifies the ADS forest.	ads
home_directory_template	String	Specifies the home directory template path.	ads
hostname	String	Specifies the fully qualified hostname that is stored in the machine account.	ads
id	String	Specifies the ID of the provider instance.	ads
ignore_all_trusts	Boolean	Ignores all trusted domains.	ads
ignored_trusted_domains	Boolean	Includes trusted domains when `ignore_all_trusts` is set to false.	ads
include_trusted_domains	Boolean	Includes trusted domains when `ignore_all_trusts` is set to true.	ads
ldap_sign_and_seal	Boolean	Uses encryption and signing on LDAP requests.	ads
login_shell	String	Specifies the login shell path.	ads
lookup_domains	String	Limits user and group lookup to the specified domains.	ads
lookup_groups	Boolean	Looks up ADS groups in other providers before allocating a GID.	ads
lookup_normalize_groups	Boolean	Normalizes ADS group names to lowercase before lookup.	ads
lookup_normalize_users	Boolean	Normalizes ADS user names to lowercase before lookup.	ads
lookup_users	Boolean	Looks up ADS users in other providers before allocating a UID.	ads
machine_account	String	Specifies the SAM account name of the machine account.	ads
machine_password_lifespan	Integer	Specifies the maximum age of a password.	ads
name	String	Specifies the ADS provider name.	ads
netbios_domain	String	Specifies the NetBIOS domain name associated with the machine account.	ads

Property	Type	Description	Property of
nss_enumeration	Boolean	Enables the ADS provider to respond to `getpwent` and `getgrent` requests.	ads
primary_domain	String	Specifies the primary domain name.	ads
sfu_support	String	Specifies whether to support RFC 2307 attributes on ADS domain controllers.	ads
site	String	Specifies the ADS site.	ads
status	String	Specifies the status of the provider.	ads
store_sfu_mappings	Boolean	Stores the SFU mappings permanently in the ID mapper.	ads
system	Boolean	Indicates that the provider instance was created by OneFS and cannot be removed.	ads

Auth ADS providers controllers resource

Applies the standard collection pattern to Active Directory service (ADS) controllers.

Operation	Method and URI
Get all domain controllers for a trusted domain	`GET /platform/1/auth/providers/ads/<domain-id>/controllers`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/ads/<domain-id>/controllers?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
dc_address	String	Specifies the address for the domain controller.	controllers
dc_name	String	Specifies the name for the domain controller.	controllers
id	String	Specifies the name for the domain controller.	controllers

Auth ADS providers search resource

Performs searches within Active Directory service (ADS) providers.

Operation	Method and URI
Get objects that are searchable in domains	`GET /platform/1/auth/providers/ads/ <object>/search`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/ads/ <object>/search?describe`

Query parameters

domain=‹string›

> The domain to search in.

user=‹string›

> The username for the domain, if untrusted.

password=‹string›

> The password for the domain, if untrusted.

filter=‹string›

> The filter to use when performing a search. The filter must be in the form of an LDAP query.

description=‹string›

> An optional description to search for.

search_users=‹Boolean›

> If true, search for users.

search_groups=‹Boolean›

> If true, search for groups.

limit=‹integer›

> Return no more than this many results at one time (see `resume`).

resume=‹string›

> Continue returning results from the previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	objects
description	String	Specifies the description returned from the Active Directory server.	objects
display_name	String	Specifies the display name returned from the Active Directory server.	objects
id	Object	Specifies the properties for a persona, which consists of either a `type` and a `name` or an `id`.	objects

Property	Type	Description	Property of
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	id
name	String	Specifies the persona name, which must be combined with a type.	id
type	String	Specifies the type of persona, which must be combined with a name.	id

Auth file providers resource

Applies the standard collection pattern to authentication file providers.

Operation	Method and URI
Get all file providers	`GET /platform/1/auth/providers/file`
Get one file provider	`GET /platform/1/auth/providers/file/` `<provider-id>`
Create a file provider	`POST /platform/1/auth/providers/file`
Modify a file provider	`PUT /platform/1/auth/providers/file/` `<provider-id>`
Delete a file provider	`DELETE /platform/1/auth/providers/file/` `<provider-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/file?` `describe`

Query parameters

scope=[user|default|effective]

If specified as `effective`, or unspecified, all fields are shown. If specified as `user`, only fields with non-default values are shown. If specified as `default`, the default values are returned.

Object properties

Property	Type	Description	Property of
authentication	Boolean	Enables authentication and identification through the provider.	file
cache_entry_expiry	Integer	Specifies the amount of time to cache a user or group.	file
create_home_directory	Boolean	Creates a home directory on the first login.	file
enabled	Boolean	Enables the file provider.	file
enumerate_groups	Boolean	Enables providers to enumerate groups.	file

Property	Type	Description	Property of
enumerate_users	Boolean	Enables providers to enumerate users.	file
findable_groups	String	Specifies a list of groups that can be resolved.	file
findable_users	String	Specifies a list of users that can be resolved.	file
group_domain	String	Specifies the domain used to qualify groups for this provider.	file
group_file	String	Specifies the location of the file that contains group information.	file
home_diretory_template	String	Specifies the home directory template path.	file
id	String	Specifies the file provider ID.	file
listable_groups	String	Specifies groups that can be viewed in the provider.	file
listable_users	String	Specifies users that can be viewed in the provider.	file
login_shell	String	Specifies the login shell path.	file
modifiable_groups	String	Specifies groups that can be modified in the provider.	file
modifiable_users	String	Specifies users that can be modified in the provider.	file
name	String	Specifies the name of the file provider.	file
netgroup_file	String	Specifies the path to a netgroups replacement file.	file
normalize_groups	Boolean	Normalizes the group name to lowercase before lookup.	file
normalize_users	Boolean	Normalizes the user name to lowercase before lookup.	file
ntlm_support	String	Specifies the supported NTLM version for users with NTLM-compatible credentials.	file
password_file	String	Specifies the location of the file that contains user information.	file
provider_domain	String	Specifies the domain for the provider.	file
restrict_findable	Boolean	Checks the provider for filtered lists of findable and unfindable users and groups.	file
restrict_listable	Boolean	Checks the provider for filtered lists of listable and unlistable users and groups.	file

Property	Type	Description	Property of
restrict_modifiable	Boolean	Checks the provider for filtered lists of modifiable and unmodifiable users and groups.	file
status	String	Specifies the status of the provider.	file
system	Boolean	Indicates that the provider instance was created by OneFS and cannot be removed.	file
unfindable_groups	String	Specifies a group that cannot be resolved by the provider.	file
unfindable_users	String	Specifies a user that cannot be resolved by the provider.	file
unlistable_groups	String	Specifies a group that cannot be listed by the provider.	file
unlistable_users	String	Specifies a user who cannot be listed by the provider.	file
unmodifiable_groups	String	Specifies a group that cannot be modified by the provider.	file
unmodifiable_users	String	Specifies a user who cannot be modified by the provider.	file
user_domain	String	Specifies the domain that qualifies users for this provider.	file

Auth LDAP providers resource

Applies the standard collection pattern to individual Lightweight Directory Access Protocol (LDAP) authentication providers.

Operation	Method and URI
Get all LDAP providers	`GET /platform/1/auth/providers/ldap`
Get one LDAP provider	`GET /platform/1/auth/providers/ldap/<provider-id>`
Create an LDAP provider	`POST /platform/1/auth/providers/ldap`
Modify an LDAP provider	`PUT /platform/1/auth/providers/ldap/<provider-id>`
Delete an LDAP provider	`DELETE /platform/1/auth/providers/ldap/<provider-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/ldap/<provider-id>?describe`

Query parameters

scope=[user|default|effective]

If specified as `effective`, or unspecified, all fields are shown. If specified as `user`, only fields with non-default values are shown. If specified as `default`, the default values are returned.

Object properties

Property	Type	Description	Property of
authentication	Boolean	Enables authentication and identification through the provider.	ldap
balance_servers	Boolean	Connects the provider to a random server.	ldap
base_dn	String	Specifies the root of the tree in which to search for identities.	ldap
bind_dn	String	Specifies a distinguished name that is used when binding to LDAP servers.	ldap
bind_mechanism	String	Specifies the bind mechanism to use when connecting to an LDAP server. The only supported value is `simple`.	ldap
bind_password	String	Specifies a password for a distinguished name that is used when binding to LDAP servers.	ldap
bind_timeout	Integer	Specifies a timeout in seconds when binding LDAP servers.	ldap
cache_entry_expiry	Integer	Specifies the amount of time to cache a user or group.	ldap
certificate_authority_file	String	Specifies the path to the root certificates file.	ldap
check_online_interval	Integer	Specifies the time between the provider online checks.	ldap
cn_attribute	String	Specifies the canonical name.	ldap
create_home_directory	Boolean	Creates a home directory on the first login.	ldap
crypt_password_attribute	String	Specifies a hashed password value.	ldap
email_attribute	String	Specifies the LDAP email attribute.	ldap
enabled	Boolean	Enables the LDAP provider.	ldap
enumerate_groups	Boolean	Enables the LDAP provider to enumerate groups.	ldap
enumerate_users	Boolean	Enables the LDAP provider to enumerate users.	ldap
findable_groups	String	Specifies a list of groups that can be resolved.	ldap
findable_users	String	Specifies a list of users that can be resolved.	ldap
gecos_attribute	String	Specifies the LDAP GECOS attribute.	ldap

Property	Type	Description	Property of
gid_attribute	String	Specifies the LDAP GID attribute.	ldap
group_base_dn	String	Specifies a distinguished name for the entry where LDAP searches for groups begins.	ldap
group_domain	String	Specifies the domain used to qualify groups for this provider.	ldap
group_filter	String	Specifies the LDAP filter for group objects.	ldap
group_members_attribute	String	Specifies the LDAP Group Members attribute.	ldap
group_search_scope	String	Specifies the depth from the base DN to perform LDAP searches.	ldap
home_directory_template	String	Specifies the home directory template path.	ldap
homedir_attribute	String	Specifies the LDAP Homedir attribute.	ldap
id	String	Specifies the ID of the LDAP provider.	ldap
ignore_tls_errors	String	Continues over secure connections, even if the identity check fails.	ldap
listable_groups	String	Specifies groups that can be viewed in the provider.	ldap
listable_users	String	Specifies users that can be viewed in the provider.	ldap
login_shell	String	Specifies the login shell path.	ldap
name	String	Specifies the name of the LDAP provider.	ldap
name_attribute	String	Specifies the LDAP UID attribute, which is used as the login name.	ldap
netgroup_base_dn	String	Specifies a distinguished name for the entry where LDAP searches for netgroups begins.	ldap
netgroup_filter	String	Specifies the LDAP filter for netgroup objects.	ldap
netgroup_members_attribute	String	Specifies the LDAP Netgroup Members attribute.	ldap
netgroup_search_scope	String	Defines the depth from the base DN to perform LDAP searches.	ldap
netgroup_triple_attribute	String	Specifies the LDAP Netgroup Triple attribute.	ldap
normalize_groups	Boolean	Normalizes group names to lowercase before lookup.	ldap
normalize_users	Boolean	Normalizes user names to lowercase before lookup.	ldap

Property	Type	Description	Property of
nt_password_attribute	String	Specifies the LDAP NT Password attribute.	ldap
ntlm_support	String	Specifies the supported NTLM version for users with NTLM-compatible credentials.	ldap
provider_domain	String	Specifies the provider domain.	ldap
require_secure_connection	Boolean	Specifies whether to continue over a non-TLS connection.	ldap
restrict_findable	Boolean	Checks the provider for filtered lists of findable and unfindable users and groups.	ldap
restrict_listable	Boolean	Checks the provider for filtered lists of listable and unlistable users and groups.	ldap
search_scope	String	Specifies the default depth from the base DN to perform LDAP searches.	ldap
search_timeout	Integer	Specifies the search timeout period.	ldap
server_uris	String	Specifies the server URIs.	ldap
shell_attribute	String	Specifies the LDAP shell attribute.	ldap
status	String	Specifies the status of the provider.	ldap
system	Boolean	Indicates that the provider instance was created by OneFS and cannot be removed.	ldap
uid_attribute	String	Specifies the LDAP UID Number attribute.	ldap
unfindable_groups	String	Specifies groups that cannot be resolved by the provider.	ldap
unfindable_users	String	Specifies users who cannot be resolved by the provider.	ldap
unique_group_members_attribute	String	Specifies the LDAP Unique Group Members attribute.	ldap
unlistable_groups	String	Specifies a group that cannot be listed by the provider.	ldap
unlistable_users	String	Specifies a user who cannot be listed by the provider.	ldap
user_base_dn	String	Specifies a distinguished name for the entry where LDAP searches for users begins.	ldap
user_domain	String	Specifies the domain used to qualify users for this provider.	ldap
user_filter	String	Specifies the LDAP filter for user objects.	ldap

Property	Type	Description	Property of
user_search_scope	String	Specifies the depth from the base DN to perform LDAP searches.	ldap

Auth local providers resource

Applies the standard collection pattern to local authentication providers.

Operation	Method and URI
Get all local providers	`GET /platform/1/auth/providers/local`
Get one local provider	`GET /platform/1/auth/providers/local/ <file-id>`
Create a local provider	`POST /platform/1/auth/providers/local`
Modify a local provider	`PUT /platform/1/auth/providers/local/ <file-id>`
Delete a local provider	`DELETE /platform/1/auth/providers/ local/<file-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/local? describe`

Query parameters

scope=[user|default|effective]

If this parameter is specified as `effective`, or if it is not specified, all export fields are shown. If this parameter is specified as `user`, only fields with non-default values are shown. If this parameter is specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
authentication	Boolean	Enables authentication and identification through the provider.	local
create_home_directory	Boolean	Creates a home directory on the first login.	local
home_directory_template	String	Specifies the home directory template path.	local
id	String	Specifies the ID for the local provider.	local
lockout_duration	Integer	Specifies the length of time in seconds that an account is inaccessible after multiple failed login attempts.	local
lockout_threshold	Integer	Specifies the number of failed login attempts necessary for an account to be locked out.	local

Property	Type	Description	Property of
lockout_window	Integer	Specifies the time in seconds in which `lockout_threshold` failed attempts must be made for an account to be locked out.	local
login_shell	String	Specifies the login shell path.	local
machine_name	String	Specifies the Active Directory account name for the machine.	local
max_password_age	Integer	Specifies the maximum password age in seconds.	local
min_password_age	Integer	Specifies the minimum password age in seconds.	local
min_password_length	Integer	Specifies the minimum password length.	local
name	String	Specifies the name of the local provider.	local
password_prompt_time	Integer	Specifies time in seconds remaining before being prompted to change the password.	local
status	String	Specifies the status of the provider.	local
system	Boolean	Indicates that the provider instance was created by OneFS and cannot be removed.	local

Auth NIS providers resource

Applies the standard collection pattern to Network Information Service (NIS) authentication providers.

Operation	Method and URI
Get all NIS providers	`GET /platform/1/auth/providers/nis`
Get one NIS provider	`GET /platform/1/auth/providers/nis/<nis-name>`
Create an NIS provider	`POST /platform/1/auth/providers/nis`
Modify an NIS provider	`PUT /platform/1/auth/providers/nis/<nis-name>`
Delete an NIS provider	`DELETE /platform/1/auth/providers/nis/<nis-name>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/providers/nis?describe`

Query parameters

scope=[user|default|effective]

If this parameter is specified as `effective`, or if it is not specified, all export fields are shown. If this parameter is specified as `user`, only fields with non-default values are shown. If this parameter is specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
authentication	Boolean	Enables authentication and identification through the provider.	nis
balance_servers	Boolean	Enables the provider to connect to a random server.	nis
cache_entry_expiry	Integer	Specifies the amount of time in seconds to cache a user or group.	nis
check_online_interval	Integer	Specifies the amount of time in seconds between provider online checks.	nis
create_home_directory	Integer	Creates a home directory on first login.	nis
enabled	Boolean	Enables the NIS provider.	nis
enumerate_groups	Boolean	Enables the provider to enumerate groups.	nis
enumerate_users	Boolean	Enables the provider to enumerate users.	nis
findable_groups	String	Specifies a list of groups that can be resolved.	nis
findable_users	String	Specifies a list of users that can be resolved.	nis
group_domain	String	Specifies the domain used to qualify groups for this provider.	nis
home_directory_template	String	Specifies the home directory template path.	nis
hostname_lookup	Boolean	Enables host name lookups.	nis
id	String	Specifies the NIS provider ID.	nis
listable_groups	String	Specifies groups that can be viewed in the provider.	nis
listable_users	String	Specifies users that can be viewed in the provider.	nis
login_shell	String	Specifies the login shell path.	nis
name	String	Specifies the NIS provider name.	nis
nis_domain	String	Specifies the NIS domain name.	nis
normalize_groups	Boolean	Normalizes the group name to lowercase before lookup.	nis

Property	Type	Description	Property of
normalize_users	Boolean	Normalizes the user name to lowercase before lookup.	nis
ntlm_support	String	Specifies the NTLM version for users with NTLM-compatible credentials.	nis
provider_domain	String	Specifies the provider domain.	nis
request_timeout	Integer	Specifies the request timeout interval in seconds.	nis
restrict_findable	Boolean	Checks the provider for filtered lists of findable and unfindable users.	nis
restrict_listable	Boolean	Checks the provider for filtered lists of listable and unlistable users.	nis
retry_time	Integer	Specifies the timeout period in seconds after which a request is retried.	nis
servers	String	Provides a list of NIS servers to be used by this provider.	nis
check_online_interval	Integer	Specifies the amount of time in seconds between provider online checks.	nis
status	String	Specifies the status of the provider.	nis
system	String	Indicates that the provider instance was created by OneFS and cannot be removed.	nis
unfindable_groups	String	Specifies a group that cannot be resolved by the provider.	nis
unfindable_users	String	Specifies a user that cannot be resolved by the provider.	nis
unlistable_groups	String	Specifies a group that cannot be listed by the provider.	nis
unlistable_users	String	Specifies a user that cannot be resolved by the provider.	nis
user_domain	String	Specifies the domain used to qualify users for this provider.	nis
ypmatch_using_tcp	Boolean	Uses TCP for YP match operations.	nis

Auth roles members resource

Applies the standard collection pattern to members of roles.

Operation	Method and URI
Get the members of a role	`GET /platform/1/auth/roles/<member-id>/members`

Operation	Method and URI
Add a member to a role	`POST /platform/1/auth/roles/<member-id>/members`
Remove a member from a role	`DELETE /platform/1/auth/roles/<member-id>/members/<persona-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/roles/<member-id>/members?describe`

Query parameters

resolve_names=‹Boolean›

Resolves the names of personas.

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
members	Array	Specifies users or groups that are assigned this role.	roles
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	members
name	String	Specifies the persona name, which must be combined with a type.	members
type	String	Specifies the persona type, which must be combined with a name.	members

Auth roles resource

Applies the standard collection pattern to roles.

Operation	Method and URI
Get all roles	`GET /platform/1/auth/roles`
Get one role	`GET /platform/1/auth/roles/<role-id>`
Create a role	`POST /platform/1/auth/roles`
Modify a role	`PUT /platform/1/auth/roles/<role-id>`
Delete a role	`DELETE /platform/1/auth/roles/<role-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/roles?describe`

Query parameters

resolve_names=‹Boolean›

Filters users by zone.

resume=‹string›

Continue returning results from the previous call (cannot be used with other options).

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	String	Specifies an ID for the role.	roles
name	String	Specifies a name for the role.	roles
members	Array	Specifies users or groups that are assigned this role.	roles
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	members
name	String	Specifies the persona name, which must be combined with a type.	members
type	String	Specifies the persona type, which must be combined with a name.	members
privileges	Array	Specifies privileges that are granted by the role.	roles
id	String	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	privileges
name	String	Specifies the persona name, which must be combined with a type.	privileges
type	String	Specifies the persona type, which must be combined with a name.	privileges

Auth roles privileges resource

Applies the standard collection pattern to the privileges that belong to a role.

Operation	Method and URI
Get the privileges of a role	`GET /platform/1/auth/roles/<id>/privileges`
Add a privilege to a role	`POST /platform/1/auth/roles/<id>/privileges`
Remove a privilege from a role	`DELETE /platform/1/auth/roles/<id>/privileges/<privilege-id>`
View the detailed JSON schema for this resource	`GET /platform/1/auth/roles/<id>/privileges?describe`

Query parameters

resume=‹string›

Continue returning results from the previous call.

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	String	Specifies an ID for the privilege.	privileges
name	String	Specifies a name for the privilege.	privileges
read-only	Boolean	Determines if the privilege is set for read-only rights.	privileges

Auth global settings resource

Applies the standard system object pattern to the global authentication settings.

Operation	Method and URI
Get global settings	`GET /platform/1/auth/settings/global`
Modify global settings	`PUT /platform/1/auth/settings/global`
View the detailed JSON schema for this resource	`GET /platform/1/auth/settings/global?describe`

Query parameters

scope=[effective|user|default]

If this parameter is specified as `effective`, or if it is not specified, all export fields are shown. If this parameter is specified as `user`, only fields with non-default values are shown. If this parameter is specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
alloc_retries	Integer	Specifies the number of times to retry an ID allocation before failing.	global_settings
cache_cred_lifetime	Integer	Specifies the length of time in seconds to cache credential responses from the ID mapper.	global_settings
cache_id_lifetime	Integer	Specifies the length of time in seconds to cache ID responses from the ID mapper.	global_settings
gid_range_enabled	Boolean	Enables the use of a fixed range for allocating a GID.	global_settings
gid_range_max	Integer	Specifies the ending number for allocating a GID.	global_settings
gid_range_min	Integer	Specifies the starting number for allocating a GID.	global_settings

Property	Type	Description	Property of
gid_range_next	Integer	Specifies the next GID to be allocated.	global_settings
group_uid	Integer	Specifies the UID to use when the kernel must retrieve a UID for a group.	global_settings
load_providers	Array	Specifies which providers are loaded by the authentication daemon (lsassd).	global_settings
min_mapped_rid	Integer	Starts RID in the local domain to map a UID and a GID.	global_settings
null_gid	Integer	Specifies the alternative GID to use when the kernel is unable to retrieve a GID for a persona.	global_settings
null_uid	Integer	Specifies the alternative UID to use when the kernel is unable to retrieve a UID for a persona.	global_settings
on_disk_identity	String	Specifies the type of identity that is stored on disk.	global_settings
rpc_block_time	Integer	Specifies the minimum amount of time in milliseconds to wait before performing an `oprestart`.	global_settings
rpc_max_requests	Integer	Specifies the maximum number of outstanding RPC requests.	global_settings
rpc_timeout	Integer	Specifies the maximum amount of time in seconds to wait for an `idmap` response.	global_settings
send_ntlmv2	Boolean	Specifies whether to send NTLMv2 responses.	global_settings
space_replacement	String	Specifies space replacement character.	global_settings
system_gid_threshold	Integer	Specifies the minimum GID to attempt to lookup in the `idmap` database.	global_settings
system_uid_threshold	Integer	Specifies the minimum UID to attempt to lookup in the `idmap` database.	global_settings
uid_range_enabled	Boolean	Enables a fixed range for allocating UIDs.	global_settings
uid_range_max	Integer	Specifies the ending number for allocating a UID.	global_settings
uid_range_min	Integer	Specifies the starting number for allocating a UID.	global_settings
uid_range_next	Integer	Specifies the next UID to allocate.	global_settings

Property	Type	Description	Property of
unknown_gid	Integer	Specifies the GID to use for an unknown or anonymous group.	global_settings
unknown_uid	Integer	Specifies the UID to use for an unknown or anonymous user.	global_settings
workgroup	String	Specifies the NetBIOS workgroup or domain.	global_settings

Auth shells resource

Retrieves a list of supported shells.

Operation	Method and URI
Get a list of the possible values for user shells	`GET /platform/1/auth/shells`
View the detailed JSON schema for this resource	`GET /platform/1/auth/shells?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
shells	String	Specifies a list of supported shells.	N/A

Auth wellknowns resource

Applies the standard collection pattern to wellknown personas.

Operation	Method and URI
Get wellknown personas.	`GET /platform/1/auth/wellknowns`
View the detailed JSON schema for this resource	`GET /platform/1/auth/wellknowns?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
wellknowns	Object	Specifies values for a persona, which consists of either a type and a name or an ID.	N/A
id	String	Specifies the serialized form of the persona (such as 'UID:0',	wellknowns

Property	Type	Description	Property of
		'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	
name	String	Specifies the persona name, which must be combined with a type.	wellknowns
type	String	Specifies the type of persona, which must be combined with a name.	wellknowns

Authentication API examples

You can see examples for some authentication API calls.

Create an authentication group

You can create an authentication group.

Request example

```
POST /platform/1/auth/group
Authorization Basic cm9vdDph

{"name": "mygroup"}
```

Response example

```
201 Created
Content-type: application/json

{
"id" : "SID:S-1-5-21-4224731515-2571109568-2823010237-1003"
}
```

Modify an authentication group

You can modify an authentication group.

Request example

You must include the `force` parameter when modifying an authentication group.

```
PUT /platform/1/auth/groups/mygroup?force=true
Authorization Basic cm9vdDph

{"gid": 2004}
```

Response example

```
204 No Content
Content-type: text/plain
```

Add a member to an authentication group

You can add a member to an authentication group.

Request example

```
POST /platform/1/auth/groups/GROUP:mygroup/members
Authorization Basic cm9vdDph

{"id": "USER:user01"}
```

Response example

```
201 Created
Content-type: application/json

{"id" : "SID:S-1-5-21-4224731515-2571109568-2823010237-1003"}
```

Create a user

You can create a user to add to an authentication group.

Request example

```
POST /platform/1/auth/users
Authorization Basic cm9vdDph

{"name": "user123"}
```

Response example

```
201 Created
Content-type: application/json

{
"id" : "SID:S-1-5-21-4224731515-2571109568-2823010237-1005"
}
```

Modify a user

You can modify the properties for a user.

Request example

In this example, an email address is added for the user.

```
PUT /platform/1/auth/users/USER:user123
Authorization Basic cm9vdDph

{"email": "test@example.com"}
```

Response example

```
204 No Content
Content-type: application/json
```

Join a domain

You can join an Active Directory server domain.

Request example

```
POST /platform/1/auth/providers/ads
Authorization Basic cm9vdDph

{"name":"server.example.com",
"user":"Administrator",
"password":"abc123"}
```

Response example

```
201 Created
Content-type: application/json

{
"id" : "SERVER.EXAMPLE.COM"
}
```

Modify an ADS provider

You can modify an Active Directory server provider.

Request example

```
PUT /platform/1/auth/providers/ads/server.example.com
Authorization Basic cm9vdDph

{"home_directory_template":"/ifs/test/ads"}
```

Response example

```
204 No Content
Content-type: text/plain
```

Modify a file provider

You can modify a file provider.

Request example

```
GET /platform/1/auth/providers/file/system
Authorization Basic cm9vdDph

{"home_directory_template" : "/ifs/home/%U"}
```

Response example

```
204 No Content
Content-type: text/plain
```

Create an LDAP provider

You can create an LDAP provider.

Request example

```
POST /platform/1/auth/providers/ldap
Authorization Basic cm9vdDph

{"name":"ldaptest",
"server_uris":["ldap://ldaptest.example.com"],
"base_dn":"dc=example,dc=com"}
```

Response example

```
201 Created
Content-type: application/json

{
"id" : "ldaptest"
}
```

Modify an LDAP provider

You can modify an LDAP provider.

Request example

```
GET /platform/1/auth/providers/ldap/ldaptest
Authorization Basic cm9vdDph

{"name":"ldaptest2",
"server_uris":["ldap://ldaptest.example.com"],
"base_dn":"dc=example,dc=com"}
```

Response example

```
204 No Content
Content-type: text/plain
```

Modify a local provider

You can modify a local provider.

Request example

```
PUT /platform/1/auth/providers/local/zone1
Authorization Basic cm9vdDph

{"home_directory_template" : "/ifs/home/%Z/%U"}
```

Response example

```
204 No Content
Content-type: text/plain
```

Create a NIS provider

You can create a NIS provider.

Request example

```
POST /platform/1/auth/providers/nis
Authorization Basic cm9vdDph

{"name":"nistest",
"servers":["nistest.example.com"],
"nis_domain":"example.com"}
```

Response example

```
201 Created
Content-type: application/json

{
"id" : "nistest"
}
```

Modify an NIS provider

You can modify an NIS provider.

Request example

```
PUT /platform/1/auth/providers/nis/nistest
Authorization Basic cm9vdDph

{"name":"nistest2",
"servers":["nistest.example.com"],
"nis_domain":"example.com"}
```

Response example

```
204 No Content
Content-type: text/plain
```

Create an authentication role

You can create an authentication role.

Request example

```
POST /platform/1/auth/roles
Authorization Basic cm9vdDph
```

```
{"name":"dba"}
```

Response example

```
201 Created
Content-type: application/json

{
"id" : "dba"
}
```

Modify an authentication role

You can modify an authentication role.

Request example

```
PUT /platform/1/auth/roles/dba
Authorization Basic cm9vdDph
```

```
{"name":"dba2"}
```

Response example

```
204 No Content
Content-type: text/plain
```

Modify global authentication settings

You can modify global authentication settings.

Request example

```
PUT /platform/1/auth/settings/global
Authorization Basic cm9vdDph
```

```
{"send_ntlmv2":"true"}
```

Response example

```
204 No Content
Content-type: text/plain
```

CHAPTER 5

Auditing resources

This section contains the following topics:

Auditing overview

You can audit system configuration and SMB protocol activity on the Isilon cluster. All audit data is stored and protected in the cluster file system and organized in files called audit topics.

You can export SMB audit data to Varonis DatAdvantage or other third-party vendors that support the EMC Common Event Enabler (CEE) framework. You can view system configuration activity on each node through a command-line tool.

You can enable or disable system configuration auditing; no additional configuration is required. If you enable configuration auditing, all configuration events that are handled by the API—including writes, modifications, and deletions—are tracked and recorded in the `config` audit topic.

You can enable and configure protocol auditing for one or more access zones in the Isilon cluster. If you enable protocol auditing for an access zone, file-access events through the SMB protocol are recorded in the `protocol` audit topic. The `protocol` audit topic is consumable by auditing applications that support the EMC Common Event Enabler (CEE), such as Varonis DatAdvantage for Windows. By default, OneFS logs only the events that are handled by Varonis, but you can specify which events to log in each access zone. For example, you might want to audit the default set of protocol events in the System access zone but audit only successful attempts to delete files in a different access zone.

Audit resources

You can retrieve and modify OneFS audit topics and settings.

Audit settings resource

Applies the standard system object pattern to OneFS audit settings.

Operation	Method and URI
Get audit settings	GET /platform/1/audit/settings
Modify audit settings	PUT /platform/1/audit/settings
View the detailed JSON schema for this resource.	GET /platform/1/audit/settings?describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
config_auditing_enabled	Boolean	Enables logging for API configuration changes when set to true.	settings
protocol_auditing_enabled	Boolean	Enables logging for the I/O stream when set to true.	settings
audited_zones	String	Specifies the zones that are audited when the	settings

Property	Type	Description	Property of
		`protocol_auditing_enabled` property is set to true.	
cee_server_uris	String	Specifies a list of Common Event Enabler (CEE) server URIs. Protocol audit logs are sent to these URIs for external processing.	settings

Audit topic resource

Applies the standard collection pattern to OneFS Audit topics.

Operation	Method and URI
Get all audit topics	GET /platform/1/audit/topics
Get an audit topic	GET /platform/1/audit/topics/‹name›
Modify an audit topic	PUT /platform/1/audit/topics/‹name›
View the detailed JSON schema for this resource.	GET /platform/1/audit/topics?describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Specifies the system-provided ID for the audit topic.	topics
name	String	Specifies the name of the audit topic.	topics
max_cached_messages	String	Specifies the number of messages that can be sent and received at the same time. Messages that are sent and received at the same time can be lost if a system crash occurs. However, you can prevent message loss by setting the `max_cached_message` property to 0, which sets audit logs to synchronous.	topics

Audit API examples

You can see examples for some audit API calls.

Enable protocol auditing

You can enable SMB protocol auditing on the system for specified zones.

Request example

In the following example, protocol auditing is enabled for the "myZone" and "System" zones.

```
PUT /platform/1/audit/settings
Authorization Basic cm9vdDph

    {
        'audited_zones': ['myZone', 'System'],
        'protocol_auditing_enabled': True
    }
```

Response example

In the following example, the request was successful, and protocol auditing is enabled on the system for the specified zones. No message body is returned for this request.

```
204 No Content
Content-type: text/plain,
Allow: 'GET, PUT, HEAD'
```

Enable configuration auditing

You can enable configuration auditing on the system.

Request example

```
PUT /platform/1/audit/settings
Authorization Basic cm9vdDph

    {
        'config_auditing_enabled': True
    }
```

Response example

No message body is returned for this request.

```
204 No Content
Content-type: text/plain,
Allow: 'GET, PUT, HEAD'
```

Modify an audit topic

You can modify an audit topic on the system.

Request example

```
PUT /1/audit/topics/protocol
Authorization Basic cm9vdDph

    {
        "max_cached_messages": 1000
    }
```

Response example

No message body is returned for this request.

```
204 No Content
Content-type: text/plain,
Allow: 'GET, PUT, HEAD'
```

CHAPTER 6

NFS resources

This section contains the following topics:

NFS

OneFS includes a configurable NFS service to create and manage NFS exports, which provide UNIX clients network access to file system resources on the cluster.

The Isilon cluster supports NIS and LDAP authentication providers for NFS file sharing. OneFS supports asynchronous and synchronous communication over NFS.

NFS resources

You can retrieve, create, modify, or delete NFS export configurations and settings.

NFS exports summary resource

Retrieves summary information for NFS exports.

Operations	Method and URI
Get the NFS exports summary	`GET /platform/1/protocols/nfs/exports-summary`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/nfs/exports-summary?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
count	Integer	Specifies the total number of exports in the system.	summary

NFS export resource

Applies the standard collection pattern to NFS exports.

Operation	Method and URI
Get all NFS exports	`GET /platform/1/protocols/nfs/exports`
Get one NFS export	`GET /platform/1/protocols/nfs/exports/<export-id>`
Create an NFS export	`POST /platform/1/protocols/nfs/exports`
Modify an NFS export	`PUT /platform/1/protocols/nfs/exports`
Delete an NFS export	`DELETE /platform/1/protocols/nfs/exports/<export-id>`
View the detailed JSON schema for NFS exports	`GET /platform/1/protocols/nfs/exports?describe`

Operation	Method and URI
View the detailed JSON schema for a single NFS export	`GET /platform/1/protocols/nfs/exports/<export-id>?describe`

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

check=‹Boolean›

Check for conflicts when listing exports.

scope=[effective|user]

If this parameter is specified as `effective`, or if it is unspecified, all export fields are shown. If this parameter is specified as `user`, only fields with non-default values are shown.

force=‹Boolean›

Override client and username conflicts or errors when creating or modifying an export.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of exports configured.	N/A
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	Integer	Specifies the system ID given to the export. In a POST request, this value is the ID that refers to the item in the collection item resource path.	exports
description	String	Specifies the user defined string that is used to identify the export.	exports
paths	String	Specifies the paths under `/ifs` that are exported.	exports
force	String	True if the export is created, even when in conflict with another export, path, client, or user.	exports
clients	String	Specifies the clients with access to the export.	exports

Property	Type	Description	Property of
root_clients	Array	Specifies the clients with root access to the export.	exports
read_only_clients	Array	Specifies the clients with read-only access to the export.	exports
read_write_clients	Array	Specifies the clients with both read and write access to the export, even when the export is set to read-only.	exports
unresolved_clients	Array	Specifies the clients that cannot be resolved by hostname to an IP address.	exports
conflicting_paths	String	Specifies the paths that conflict with another export.	exports
all_dirs	Boolean	True if all directories under the specified paths are mountable.	exports
block_size	Integer	Specifies the block size returned by the NFS statfs procedure. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
can_set_time	Boolean	True if the client may set file times using the NFS set attribute request. When set to false, the server ignores the setting and behaves as if the value is set to true. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
commit_asynchronous	Boolean	True if NFS commit requests execute asynchronously.	exports
directory_transfer_size	Integer	Specifies the preferred size for directory read operations. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
encoding	String	Specifies the default character set encoding of the clients connecting to the export, unless otherwise specified.	exports
map_lookup_uid	Boolean	True if incoming user IDs (UIDs) are mapped to users in the OneFS user database. When set to false, incoming UIDs are applied directly to file operations.	exports
map_retry	Boolean	Determines whether searches for the users specified in `map_all` or	exports

Property	Type	Description	Property of
		`map_root` are retried if the search fails.	
map_all	Object	Specifies the users and groups that are mapped to non-root clients.	exports
groups	String	Specifies the name of the group that non-root clients are mapped to.	map
user	String	Specifies the name of the user that non-root clients are mapped to.	map
map_full	Boolean	True if user mappings query the OneFS user database. When set to false, user mappings only query local authentication.	exports
map_root	Object	Specifies the users and groups that are mapped to root clients.	exports
groups	String	Specifies the name of the group that non-root clients are mapped to.	map
user	String	Specifies the name of the user that non-root clients are mapped to.	map
max_file_size	Integer	Specifies the maximum file size for any file accessed from the export.	exports
read_only	Boolean	True if the export is read-only.	exports
readdirplus	Boolean	True if `readdirplus` requests are enabled. Enabling this property may improve network performance and is only available for NFSv3.	exports
readdirplus_prefetch	Integer	Sets the number of directory entries that are prefetched when a `readdirplus` request is processed.	exports
return_32bit_file_ids	Boolean	Limits the size of file identifiers returned by NFSv3+ to 32-bit values.	exports
read_transfer_max_size	Integer	Specifies the maximum buffer size that clients should use on NFS read requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
read_transfer_multiple	Integer	Specifies the preferred multiple size for NFS read requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
read_transfer_size	Integer	Specifies the preferred size for NFS read requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports

Property	Type	Description	Property of
security_flavors	Array	Specifies the authentication types that are supported for this export.	exports
setattr_asynchronous	Boolean	True if set attribute operations execute asynchronously.	exports
symlinks	Boolean	True if symlinks are supported. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
time_delta	Integer	Specifies the resolution of all time values that are returned to the client.	exports
write_datasync_action	String	Specifies the action to be taken when an NFSv3+ datasync write is requested.	exports
write_datasync_reply	String	Specifies the stability disposition returned when an NFSv3+ datasync write is processed.	exports
write_filesync_action	String	Specifies the action to be taken when an NFSv3+ filesync write is requested.	exports
write_filesync_reply	String	Specifies the stability disposition returned when an NFSv3+ filesync is processed.	exports
write_unstable_action	String	Specifies the action taken when an NFSx3+ unstable write is processed.	exports
write_unstable_reply	String	Specifies the stability disposition returned when an NFSv3+ unstable write is requested.	exports
write_transfer_max_size	Integer	Specifies the maximum buffer size that clients should use on NFS write requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
write_transfer_multiple	Integer	Specifies the preferred multiple size for NFS write requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports
write_transfer_size	Integer	Specifies the preferred size for NFS write requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	exports

NFS NLM locks resource

Applies the standard collection pattern to NFS Network Lock Manager (NLM) advisory locks.

Operation	Method and URI
Get a list of NFS advisory locks	`GET /platform/1/protocols/nfs/nlm/locks`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/nfs/nlm/locks?describe`

Query parameters

sort=‹string›

Order results by this field.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of locks available.	N/A
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	String	Specifies the system ID given to the lock. In a POST request, this value is the ID that refers to the item in the collection item resource path.	locks
client	String	Specifies the client host name and IP address.	locks
client_id	String	Specifies the client ID.	locks
lock_type	String	Specifies the type of lock.	locks
range	Integer	Specifies the byte range within the locked file.	locks
path	String	Specifies the path under `/ifs` that is locked.	locks
created	Integer	Specifies the UNIX Epoch time the lock was created.	locks

Property	Type	Description	Property of
lin	String	Specifies the LIN in `/ifs` that is locked.	locks

NFS NLM lock waiters resource

Applies the standard collection pattern to NFS Network Lock Manager (NLM) lock waiters.

Operation	Method and URI
Get a list of NLM lock waiters on NFS	`GET /platform/1/protocols/nfs/nlm/waiters`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/nfs/nlm/waiters?describe`

Query parameters

sort=‹string›

Order results by this field.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of lock waiters available.	N/A
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	String	Specifies the system ID given to the lock. In a POST request, this value is the ID that refers to the item in the collection item resource path.	waiters
client	String	Specifies the client host name and IP address.	waiters
client_id	String	Specifies the client ID.	waiters
lock_type	String	Specifies the type of lock.	waiters
range	Integer	Specifies the byte range within the locked file.	waiters

Property	Type	Description	Property of
path	String	Specifies the path under /ifs that is locked.	waiters
created	Integer	Specifies the UNIX Epoch time the lock was created.	waiters
lin	String	Specifies the LIN in /ifs that is locked.	waiters

NFS NLM sessions resource

Applies the standard collection pattern to NFS Network Lock Manager (NLM) sessions.

Operation	Method and URI
Get all NFS NLM sessions	GET /platform/1/protocols/nfs/nlm/sessions
Delete an NFS NLM session	DELETE /platform/1/protocols/nfs/nlm/sessions/<session-id>
View the detailed JSON schema for NFS NLM sessions	GET /platform/1/protocols/nfs/nlm/sessions?describe
View the detailed JSON schema for an NFS NLM session	GET /platform/1/protocols/nfs/nlm/sessions/<session-id>?describe

Query parameters

sort=‹string›

Order results by this field.

dir=[ASC|DESC]

Directions for the sort order are ascending (ASC) or descending (DESC). The default setting is ASC.

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	String	Specifies the total number of sessions to display.	N/A
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	String	Specifies the system ID given to the lock. In a POST request, this value is the ID that refers to the item in the collection item resource path.	sessions

Property	Type	Description	Property of
client	String	Specifies the client host name and IP address.	sessions
client_id	String	Specifies the client ID.	sessions
lock_type	String	Specifies the type of lock.	sessions
range	String	Specifies the byte range within the locked file.	sessions
path	String	Specifies the path under `/ifs` that is locked.	sessions
created	String	Specifies the UNIX Epoch time the lock was created.	sessions
lin	String	Specifies the LIN in `/ifs` that is locked.	sessions

NFS default export settings resource

Applies the standard system object pattern to default NFS export settings. These settings are applied to all new exports, unless otherwise specified.

Operation	Method and URI
Get default NFS export settings	`GET /platform/1/protocols/nfs/settings/export`
Modify default NFS export settings	`PUT /platform/1/protocols/nfs/settings/export`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/nfs/settings/export?describe`

Query parameters

scope=[effective|user|default]

When specified as `effective`, or not specified, all fields are returned. When specified as `user`, only fields with non-default values are shown. When specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
all_dirs	Boolean	True if all directories under the specified paths are mountable.	settings
block_size	Integer	Specifies the block size returned by the NFS statfs call. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings

Property	Type	Description	Property of
can_set_time	Boolean	True if the client may set file times using the NFS set attribute request. When set to false, the server ignores the setting and behaves as if the value is set to true. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
commit_asynchronous	Boolean	True if NFS commit requests execute asynchronously.	settings
directory_transfer_size	Integer	Specifies the preferred size for directory read operations. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
encoding	String	Specifies the default character set encoding of the clients connecting to the export, unless otherwise specified.	settings
map_lookup_uid	Boolean	True if incoming UIDs are mapped to users in the OneFS user database. When set to false, incoming UIDs are applied directly to file operations.	settings
map_retry	Boolean	Determines whether searches for the users specified in `map_all` or `map_root` are retried if the search fails.	settings
map_all	Object	Specifies the users and groups that are mapped to non-root clients.	settings
groups	String	Specifies the name of the group that non-root clients are mapped to.	map
user	String	Specifies the name of the user that non-root clients are mapped to.	map
map_full	Boolean	True if user mappings query the OneFS user database. When set to false, user mappings query only local authentication.	settings
map_root	Object	Specifies the users and groups that are mapped to root clients.	settings
groups	String	Specifies the name of the group that non-root clients are mapped to.	map
user	String	Specifies the name of the user that non-root clients are mapped to.	map
max_file_size	Integer	Specifies the maximum file size for any file accessed from the export.	settings

Property	Type	Description	Property of
read_only	Boolean	True if the export is read-only.	settings
readdirplus	Boolean	True if `readdirplus` requests are enabled. Enabling this property may improve network performance and is available only for NFSv3.	settings
readdirplus_prefetch	Integer	Sets the number of directory entries that are prefetched when a `readdirplus` request is processed.	settings
return_32bit_file_ids	Boolean	Limits the size of file identifiers returned by NFSv3+ to 32-bit values.	settings
read_transfer_max_size	Integer	Specifies the maximum buffer size that clients should use on NFS read requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
read_transfer_multiple	Integer	Specifies the preferred multiple size for NFS read requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
read_transfer_size	Integer	Specifies the preferred size for NFS read requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
security_flavors	Array	Specifies the authentication types that are supported for this export.	settings
setattr_asynchronous	Boolean	True if set attribute operations execute asynchronously.	settings
symlinks	Boolean	True if `symlinks` are supported. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
time_delta	Integer	Specifies the resolution of all time values that are returned to the client.	settings
write_datasync_action	String	Specifies the action to be taken when an NFSv3+ datasync write is requested.	settings
write_datasync_reply	String	Specifies the stability disposition returned when an NFSv3+ datasync write is processed.	settings
write_filesync_action	String	Specifies the action to be taken when an NFSv3+ filesync write is requested.	settings
write_filesync_reply	String	Specifies the stability disposition returned when an NFSv3+ filesync is processed.	settings

Property	Type	Description	Property of
write_unstable_action	String	Specifies the action taken when an NFSx3+ unstable write is processed.	settings
write_unstable_reply	String	Specifies the stability disposition returned when an NFSv3+ unstable write is requested.	settings
write_transfer_max_size	Integer	Specifies the maximum buffer size that clients are recommended to use on NFS write requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
write_transfer_multiple	Integer	Specifies the preferred multiple size for NFS write requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings
write_transfer_size	Integer	Specifies the preferred size for NFS write requests. This value is used to advise the client of optimal settings for the server, but is not enforced.	settings

NFS global settings resource

Applies the standard system object pattern to global NFS settings.

Operation	Method and URI
Get default NFS export settings	`GET /platform/1/protocols/nfs/settings/global`
Modify default NFS export settings	`PUT /platform/1/protocols/nfs/settings/global`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/nfs/settings/global?describe`

Query parameters

scope=[effective|user|default]

When specified as `effective`, or not specified, all fields are returned. When specified as `user`, only fields with non-default values are shown. When specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
service	Boolean	Enables the NFS service. When set to false, disables the NFS service.	settings

Property	Type	Description	Property of
nfsv2_enabled	Boolean	Enables NFSv2. When set to false, disables NFSv2.	settings
nfsv3_enabled	Boolean	Enables NFSv3. When set to false, disables NFSv3.	settings
nfsv4_enabled	Boolean	Enables NFSv4. When set to false, disables NFSv4.	settings
nfsv4_domain	String	Provides the domain used to associate users and groups.	settings
lock_protection	Integer	Provides the number of nodes that can fail in the cluster without losing lock functionality.	settings
rpc_minthreads	Integer	Provides the minimum number of threads in the nfsd thread pool.	settings
rpc_maxthreads	Integer	Provides the maximum number of threads in the nfsd thread pool.	settings

NFS exports configuration check resource

Retrieves information on the status and validity of current NFS exports. Each export with an error is reported along with the first error encountered during the check.

Operation	Method and URI
Check NFS exports for configuration errors	`GET /platform/1/protocols/nfs/check`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/nfs/check?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Specifies the system ID given to the export. In a POST request, this value is the ID that refers to the item in the collection item resource path.	checks
message	String	Specifies a description of the conflict or error encountered.	checks

NFS reload resource

Reloads cached export information. The netgroup cache is updated against the remote provider and hosts are updated against the DNS if the time to live (TTL) has expired. Netgroups are automatically refreshed on an interval specified by the netgroup expiration option. DNS hosts are intermittently refreshed. Local export information, such as options

specified with exports create or exports modify, is updated immediately following the action.

Operation	Method and URI
Reload NFS exports	`POST /platform/1/protocols/nfs/reload`
View the detailed JSON schema for NFS export reload	`GET /platform/1/protocols/nfs/reload?describe`

Query parameters
There are no parameters for this resource.

Object properties
There are no properties for this resource.

CHAPTER 7

SMB resources

This section contains the following topics:

SMB

OneFS includes a configurable SMB service to create and manage SMB shares. SMB shares provide Windows clients network access to file system resources on the cluster. You can grant permissions to users and groups to carry out operations such as reading, writing, and setting access permissions on SMB shares.

The /ifs directory is configured as an SMB share and is enabled by default. OneFS supports both user and anonymous security modes. If the user security mode is enabled, users who connect to a share from an SMB client must provide a valid user name with proper credentials.

The SMB protocol uses security identifiers (SIDs) for authorization data. All identities are converted to SIDs during retrieval and are converted back to their on-disk representation before they are stored on the cluster.

When a file or directory is created, OneFS checks the access control list (ACL) of its parent directory. If the ACL contains any inheritable access control entries (ACEs), a new ACL is generated from those ACEs. Otherwise, OneFS creates an ACL from the combined file and directory create mask and create mode settings.

OneFS supports the following SMB clients:

SMB version	Supported operating systems
1	Windows 2000 or later Windows XP or later Mac OS X 10.5 or later
2	Windows Vista or later Windows Server 2008 or later
2.1	Windows 7 or later Windows Server 2008 R2 or later

SMB resources

You can retrieve, create, modify, or delete SMB share configurations and settings.

SMB shares summary resource

Retrieves summary information for SMB shares.

Operation	Method and URI
Get the SMB shares summary	`GET /platform/1/protocols/smb/shares-summary`
View the detailed JSON schema for this resource	`GET /platform/1/protocols/smb/shares-summary?describe`

Query parameters

There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
count	Integer	Specifies the total number of shares in the system.	summary

SMB shares resource

Applies the standard collection pattern to SMB shares.

Operation	Method and URI
Get a single SMB share	`GET /platform/1/protocols/smb/shares/ <share-name>`
Get a list of SMB shares	`GET /platform/1/protocols/smb/shares`
Create an SMB share	`POST /platform/1/protocols/smb/shares`
Modify an SMB share	`PUT /platform/1/protocols/smb/shares/ <share-name>`
Delete an SMB share	`DELETE /platform/1/protocols/smb/shares/ <share-name>`
View the detailed JSON schema for SMB shares	`GET /platform/1/protocols/smb/shares? describe`
View the detailed JSON schema for an SMB share object	`GET /platform/1/protocols/smb/shares/ <share-name>?describe`

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

zone=‹string›

An optionally named zone to use for user and group resolution.

scope=[user|default|effective]

If this parameter is specified as `effective`, or if it is unspecified, all export fields are shown. If this parameter is specified as `user`, only fields with non-default values are shown. If this parameter is specified as `default`, the original values are returned.

resolve_names=‹Boolean›

When this parameter is set to true, the group and user names are resolved.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

SMB resources

resume=‹string›

> Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of shares displayed.	N/A
resume	String	Specifies the value for the resume argument to be used for continuation requests.	N/A
run_as_root	Array	Lists the personas to be run as root. The permissions for the personas in this list override permissions specified elsewhere.	share
id	Integer	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	run_as_root
name	String	Specifies the persona name, which must be combined with type.	run_as_root
type	String	Specifies the type of persona, which must be combined with name.	run_as_root
allow_execute_always	Boolean	Enables users to execute files that they have read rights for.	share
strict_locking	Boolean	Specifies whether byte range locks contend with SMB I/O.	share
hide_dot_files	Boolean	Hides files and directories that begin with a period.	share
impersonate_guest	String	Specifies the condition in which user access is performed as the guest account.	share
strict_flush	Boolean	Determines whether the data is always flushed to disk.	share
mangle_byte_start	Integer	Specifies the starting value for the automatic byte mangling range (in decimal notation).	share
directory_create_mask	Integer	Specifies the permission bits (in decimal notation) that can be set when a directory is created.	share
directory_create_mode	Integer	Specifies the permission bits that are set when a directory is created.	share
file_create_mask	Integer	Specifies the permission bits (in decimal notation) that can be set when a file is created.	share

Property	Type	Description	Property of
file_create_mode	Integer	Specifies the permission bits that are set when a file is created.	share
create_permissions	String	Determines how permissions are set for new files and directories in the SMB share.	share
mangle_map	Array	Specifies the character mangle map.	share
impersonate_user	String	Specifies the user account to be used as a guest account.	share
change_notify	String	Specifies the level of change notification alerts on the SMB share.	share
oplocks	Boolean	Specifies whether to support oplocks.	share
allow_delete_readonly	Boolean	Specifies whether read-only files in the SMB share can be deleted.	share
ntfs_acl_support	Boolean	Supports NTFS access control lists (ACLs) on files and directories.	share
access_based_enumeration	Boolean	Enumerates only the files and folders that the requesting user has access to. This does not apply to the root directory of the share.	share
access_based_enumeration_root_only	Boolean	Specifies whether access-based enumeration is used in the root directory of the SMB share.	share
host_acl	array	Lists the hostnames, subnets, or IP addresses that are allowed or denied access to the share. All types are allowed unless specifically denied. It is recommended that a deny clause be the final entry in the list.	share
inheritable_path_acl	String	Sets an inheritable ACL on the SMB share path.	share
id	String	Specifies the system ID given to the SMB share. In a POST request, this value is the ID that refers to the item in the collection item resource path.	share
description	String	Describes the SMB share.	share
path	String	Specifies the path of the SMB share within /ifs.	share
name	String	Specifies the SMB share name.	share
csc_policy	String	Specifies the client-side caching policy for the SMB shares.	share
browsable	Boolean	Ensures that the SMB share is visible in net view and in the browse list.	share

Property	Type	Description	Property of
permissions	Object	Specifies an ordered list of permission modifications.	share
permission	String	Specifies the file system rights to allow or deny.	permissions
permission_type	String	Specifies whether to allow or deny the permission.	permissions
trustee	Object	Specifies a persona, which consists of either a `type` and `name` or an `id`.	permissions
id	Integer	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	trustee
name	String	Specifies the persona name, which must be combined with type.	trustee
type	String	Specifies the type of persona, which must be combined with name.	trustee

SMB open files resource

Retrieves a listing of all files that are currently open through SMB on the queried node.

Operation	Method and URI
Get a list of files opened through SMB	`GET /platform/1/protocols/smb/openfiles`
Close a file opened through SMB	`DELETE /platform/1/protocols/smb/openfiles/<file-id>`
View the detailed JSON schema for SMB open files	`GET /platform/1/protocols/smb/openfiles?describe`
View the detailed JSON schema for an SMB open file object	`GET /platform/1/protocols/smb/openfiles/<file-id>?describe`

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of open files available.	N/A
resume	String	Specifies the value for the resume argument to be used for continuation calls.	N/A
id	Integer	Provides the system ID given to the file. In a POST request, this value is the ID used to refer to the item in the collection item resource path.	openfiles
file	String	Provides the path of the file within / ifs.	openfiles
user	String	Provides the name of the user with the file opened.	openfiles
locks	Integer	Provides the number of locks the user holds on the file.	openfiles
permissions	String	Provides the permissions on the file for the user.	openfiles

SMB sessions resource

Retrieves a listing of all SMB sessions that are currently open on the queried node.

Operation	Method and URI
Get a list of SMB sessions	`GET /platform/1/protocols/smb/sessions`
Close an SMB session user	`DELETE /platform/1/protocols/smb/sessions/<computer>/<user>`
Close an SMB session computer	`DELETE /platform/1/protocols/smb/sessions/<computer>`
View the detailed JSON schema for the SMB session	`GET /platform/1/protocols/smb/sessions?describe`
View the detailed JSON schema for the SMB session user	`GET /platform/1/protocols/smb/sessions/<computer>/<user>?describe`
View the detailed JSON schema for the SMB session computer	`GET /platform/1/protocols/smb/sessions/<computer>?describe`

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

> Return no more than this many results at one time (see `resume`).

resume=‹string›

> Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of sessions available.	N/A
resume	String	Specifies the value for the resume argument to be used for continuation calls.	N/A
id	Integer	Specifies the ID for the SMB session.	sessions
computer	String	Specifies the internet address for the client.	sessions
user	String	Specifies the local user name.	sessions
client_type	String	Specifies the client type.	sessions
openfiles	Integer	Specifies the number of files current opened by the client.	sessions
active_time	Integer	Specifies the number of seconds since the session started.	sessions
idle_time	Integer	Specifies the number of seconds since the last client operation.	sessions
guest_login	Boolean	When set to true, guests can log in.	sessions
encryption	Boolean	When set to true, the session is encrypted.	sessions

SMB share settings resource

Applies the standard system object pattern to default SMB share settings.

Operation	Method and URI
Get SMB share settings	`GET /platform/1/protocols/smb/settings/share`
Modify SMB share settings	`PUT /platform/1/protocols/smb/settings/share`
View the detailed JSON schema for SMB share settings	`GET /platform/1/protocols/smb/settings/share?describe`

Query parameters

scope=[user|default|effective]

If this parameter is specified as `effective`, or if it is not specified, all export fields are shown. If this parameter is specified as `user`, only fields with non-default values are shown. If this parameter is specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
allow_execute_always	Boolean	Enables users to execute files that they have read rights for.	settings
strict_locking	Boolean	Specifies whether byte range locks contend against SMB I/O.	settings
hide_dot_files	Boolean	Hides files and directories that begin with a period.	settings
impersonate_guest	String	Specifies the condition in which user access is performed as the guest account.	settings
strict_flush	Boolean	Determines whether the data is always flushed to disk.	settings
mangle_byte_start	Integer	The starting value for the automatic byte mangling range (in decimal notation).	settings
directory_create_mask	Integer	Specifies the permission bits (in decimal notation) that can be set when a directory is created.	settings
directory_create_mode	Integer	Specifies the permission bits that are set when a directory is created.	settings
file_create_mask	Integer	Specifies the permission bits (in decimal notation) that can be set when a file is created.	settings
file_create_mode	Integer	Specifies the permission bits that are set when a file is created.	settings
create_permissions	String	Determines how permissions are set for new files and directories in the SMB share.	settings
mangle_map	String	Specifies the character mangle map.	settings
impersonate_user	Array	Specifies the user account to be used as a guest account.	settings
change_notify	String	Specifies the level of change notification alerts on the SMB share.	settings
oplocks	Boolean	Specifies whether or not to support `oplocks`.	settings
allow_delete_readonly	Boolean	Specifies whether read-only files in the SMB share can be deleted.	settings
ntfs_acl_support	Boolean	Supports NTFS Access Control List (ACL) on files and directories.	settings

Property	Type	Description	Property of
access_based_enumeration	Boolean	Enumerates only the files and folders that the requesting user has access to, but does not apply to the root directory of the share.	settings
access_based_enumeration_root_only	Boolean	Specifies whether access-based enumeration is used in the root directory of the SMB share.	settings
host_acl	Array	Provides a list of hostnames, subnets, or IP addresses that are allowed or denied access to the share. All of these types are allowed unless specifically denied. It is recommended that a deny clause be the final entry in the list.	settings

SMB global settings resource

Applies the standard system object pattern to the global SMB share settings.

Operation	Method and URI
Get the global SMB settings	`GET /platform/1/protocols/smb/settings/global`
Modify the global SMB settings	`PUT /platform/1/protocols/smb/settings/global`
View the detailed JSON schema for the SMB share summary	`GET /platform/1/protocols/smb/settings/global?describe`

Query parameters

scope=[user|default|effective]

When specified as `effective`, or when not specified, all the fields are returned. When specified as `user`, only the fields with non-default values are returned. When specified as `default`, the original values are returned.

Object properties

Property	Type	Description	Property of
service	Boolean	Specifies whether the SMB service is enabled.	settings
access_based_share_enum	Boolean	Enumerates only shares that the requesting user has access to.	settings
audit_fileshare	String	Specifies the level of file share audit events to log.	settings
audit_logon	String	Specifies the level of logon audit events to log.	settings

Property	Type	Description	Property of
dot_snap_accessible_child	Boolean	Enables access to .snapshot directories in SMB share subdirectories. This property does not affect the root directory of the SMB share.	settings
dot_snap_accessible_root	Boolean	Enables access to the .snapshot directory in the root of all the SMB shares.	settings
dot_snap_visible_child	Boolean	Shows .snapshot directories in the SMB share subdirectories. This property does not affect the root directory of the SMB share.	settings
dot_snap_visible_root	Boolean	Shows the .snapshot directory in the root of all SMB shares.	settings
enable_security_signatures	Boolean	Indicates whether the server supports signed SMB packets.	settings
guest_user	String	Specifies the fully qualified username to use for guest access.	settings
ignore_eas	Boolean	Specifies whether to ignore extended attributes (EAs) on files.	settings
onefs_cpu_multiplier	Integer	Specifies the number of OneFS driver worker threads per CPU.	settings
onefs_num_workers	Integer	Sets the maximum number of OneFS driver worker threads.	settings
require_security_signatures	Boolean	Indicates whether the server requires signed SMB packets.	settings
server_string	String	Provides a description of the server.	settings
srv_cpu_multiplier	Integer	Specifies the number of SRV service worker threads per CPU.	settings
srv_num_workers	Integer	Sets the maximum number of SRV service worker threads.	settings
support_netbios	Boolean	Specifies whether NetBIOS support is supported on the server.	settings
support_smb2	Boolean	Specifies whether the SMB2 protocol is supported on the server.	settings

CHAPTER 8

System job resources

This section contains the following topics:

System jobs overview

The most critical function of OneFS is maintaining the integrity of data on your Isilon cluster. Other important system maintenance functions include monitoring and optimizing performance, detecting and mitigating drive and node failures, and freeing up available space.

Because maintenance functions use system resources and can take hours to run, OneFS performs them as jobs that run in the background through a service called Job Engine. The time it takes for a job to run can vary significantly depending on a number of factors. These include other system jobs that are running at the same time; other processes that are taking up CPU and I/O cycles while the job is running; the configuration of your cluster; the size of your data set; and how long since the last iteration of the job was run.

Up to three jobs can run simultaneously. To ensure that maintenance jobs do not hinder your productivity or conflict with each other, Job Engine categorizes them, runs them at different priority and impact levels, and can temporarily suspend them (with no loss of progress) to enable higher priority jobs and administrator tasks to proceed.

In the case of a power failure, Job Engine uses a checkpoint system to resume jobs as close as possible to the point at which they were interrupted. The checkpoint system helps Job Engine keep track of job phases and tasks that have already been completed. When the cluster is back up and running, Job Engine restarts the job at the beginning of the phase or task that was in process when the power failure occurred.

As system administrator, through the Job Engine service, you can monitor, schedule, run, terminate, and apply other controls to system maintenance jobs. The Job Engine provides statistics and reporting tools that you can use to determine how long different system jobs take to run in your OneFS environment.

Note

To initiate any Job Engine tasks, you must have the role of SystemAdmin in the OneFS system.

System job resources

You can retrieve, create, modify, or delete system job settings and configurations.

Job types resource

Applies the standard collection pattern to system job types.

Operation	Method and URI
Get all system job types	GET /platform/1/job/types
Get a system job type	GET /platform/1/job/types/‹name›
Modify a system job type	PUT /platform/1/job/type/‹name›
View the detailed JSON schema for this resource.	GET /platform/1/job/types?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

show_all=‹Boolean›

Whether or not all job types are returned, including hidden job types. The default value is false.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of job types available.	N/A
allow_multiple_instances	Boolean	Determines whether multiple instances of the job type can run simultaneously.	types
description	String	Provides a brief description of the job type.	types
enabled	Boolean	Determines whether the job type is enabled and is able to run on the system.	types
exclusion_set	String	Specifies a set of mutually-exclusive job types for the job. No job in the set can run concurrently with another job in the same set.	types
hidden	Boolean	Determines whether the job type is typically visible in the web administration interface.	types
id	String	Specifies the system-assigned ID for the job type.	types
policy	String	Specifies the default impact policy for the job type.	types
priority	Integer	Specifies the default priority for the job type in descending order of priority.	types
schedule	String	Specifies a schedule for the job type.	types

Job policies resource

Applies the standard collection pattern to job impact policies.

Operation	Method and URI
Get all job impact policies	GET /platform/1/job/policies
Get a job impact policy	GET /platform/1/job/policies/‹name›
Create a job impact policy	POST /platform/1/job/policies

Operation	Method and URI
Modify a job impact policy	PUT /platform/1/job/policies/‹name›
Delete a job impact policy	DELETE /platform/1/job/policies/‹name›
View the detailed JSON schema for this resource	GET /platform/1/job/policies?describe

Query parameters

sort=‹string›

Order results by this field. The default value is id.

dir=[ASC|DESC]

Directions for the sort order are ascending (ASC) or descending (DESC). The default setting is ASC.

show_all=‹Boolean›

Determines if all job types are returned, including hidden job types. The default value is false.

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of policies that are available.	N/A
resume	String	Specifies the value of the resume argument for continuation calls.	N/A
description	String	Specifies a description of the impact policy.	policies
id	String	Specifies the system-assigned ID for the impact policy. In a POST request, this value is the ID that refers to the item in the collection item resource path.	policies
intervals	Array	Specifies the time span for the impact policy.	policies
begin	String	Specifies the beginning time for the policy in the following format: 'WWWW HH:MM', where WWWW is the full name of the day of the week, HH is the hour (00-23), and MM is the minute (00-59).	intervals
end	String	Specifies the ending time for the impact, in the following format: 'WWWW HH:MM', where WWWW is the full name of the day of the week,	intervals

Property	Type	Description	Property of
		HH is the hour (00-23), and MM is the minute (00-59).	
impact	String	Specifies the impact of the time span as `low`, `medium`, `high`, or `paused`.	intervals
name	String	Specifies the name of the impact policy.	policies
system	Boolean	Determines whether the impact policy is read-only.	policies

Jobs resource

Applies the standard collection pattern to OneFS system jobs.

Operation	Method and URI
Get information about all system jobs	GET /platform/1/job/jobs
Get information about a system job	GET /platform/1/job/jobs/‹id›
Create a system job	POST /platform/1/job/jobs
Modify a system job	PUT /platform/1/job/jobs/‹id›
View the detailed JSON schema for this resource	GET /platform/1/job/jobs?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

batch=‹Boolean›

Determines if other query parameters are ignored. When set to true, all other query parameters are ignored, and the results are returned unsorted and as quickly as possible.

state=[running|paused_user|paused_system|paused_policy|paused_priority]

Return only the jobs that are in the specified state.

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the number of jobs available.	N/A
resume	String	Specifies the value of the resume argument for continuation calls.	N/A
create_time	Integer	Specifies the time the job was queued in seconds from UNIX Epoch.	jobs
current_phase	Integer	Specifies the current phase of the job.	jobs
description	String	Specifies a description of the job.	jobs
id	Integer	Specifies the system-assigned ID for the job.	jobs
impact	String	Specifies a value for the impact of the job on the system. Options include `low`, `medium`, `high`, and `paused`.	jobs
participants	Integer	Specifies the set of device IDs (devids) that are working on the job.	jobs
paths	String	Specifies the paths that the job is queued for.	jobs
policy	String	Specifies the impact policy that is applied to this job.	jobs
priority	Integer	Specifies the current priority of the job in descending order of importance.	jobs
progress	String	Specifies a human-readable description of the progress of the job. The value for this property is defined by each job implementation and can vary between the phases of the job.	jobs
retries_remaining	Integer	Specifies the number of retries available if the job fails.	jobs
running_time	Integer	Specifies how long the job has been running.	jobs
start_time	Integer	Specifies when the job started in seconds from UNIX Epoch.	jobs
state	String	Specifies the current state of the job. Options include `running`, `paused_user`, `paused_system`, `paused_policy`, `cancelled_user`, `cancelled_system`, `failed`, `succeeded`, and `unknown`.	jobs

Property	Type	Description	Property of
total_phases	Integer	Specifies the total number of phases for the job type.	jobs
type	String	Specifies the job type.	jobs
waiting_on	Integer	Specifies the system-assigned ID of the job that precedes another job in the queue.	jobs
waiting_reason	String	Specifies the reason the job is waiting. For example, a job might waiting because it is lower in priority.	jobs
allow_dup	Boolean	Determines if the job is queued when another job of the same type is already running or queued.	N/A
domainmark_params	Object	Specifies parameters for the domainmark job.	N/A
delete	Boolean	Determines if the operation is a delete operation.	domainmark_params
root	String	Specifies the /ifs path to associate with the domain.	domainmark_params
type	String	Specifies the type of domain.	domainmark_params
prepair_params	Object	Specifies the parameters for the PermissionRepair job.	N/A
mapping_type	String	Specifies the type of permissions for convert mode. Options include global, sid, unix, and native.	prepair_params
mode	String	Specifies the type of PermissionRepair operation. Options include clone, inherit, and convert.	prepair_params
template	String	Designates an /ifs file or directory as a template. This template is required for clone and inherit modes and is not accepted for convert mode.	prepair_params
zone	String	Specifies the authentication zone. This zone is not accepted for clone or inherit modes.	prepair_params
snaprevert_params	Object	Specifies the parameters required for the SnapRevert job.	N/A
snapid	Integer	Specifies the snapshot to revert.	snaprevert_params

Job reports resource

Applies the standard collection pattern to system job reports.

Operation	Method and URI
Get all job reports	GET /platform/1/job/reports
Get a job report	GET /platform/1/job/reports/‹id›
View the detailed JSON schema for this resource	GET /platform/1/audit/settings?describe

Query parameters

begin=‹integer›

Returns only reports at or after the given time in seconds from UNIX Epoch.

end=‹integer›

Returns only reports before the given time in seconds from UNIX Epoch.

job_id=‹integer›

Returns only reports with the specified job ID.

job_type=‹string›

Returns only reports with the specified job type

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of reports that are available.	N/A
resume	String	Specifies the value of the resume argument for continuation calls.	N/A
id	String	Specifies the system-assigned ID for the reported job event.	reports
job_id	Integer	Specifies the system-assigned ID for the job.	reports
job_type	String	Specifies the job type.	reports
phase	Integer	Specifies the job phase number at the time of the reported event.	reports
results	String	Specifies the job results.	reports
time	Integer	Specifies the time of the reported event in seconds from UNIX Epoch.	reports

Job events resource

Applies the standard collection pattern to system job events.

Operation	Method and URI
Get information about job events	GET /platform/1/job/events
View the detailed JSON schema for this resource	GET /platform/1/job/events?describe

Query parameters

begin=‹integer›

Returns only events at or after the given time in seconds from UNIX Epoch.

end=‹integer›

Returns only events before the given time in seconds from UNIX Epoch.

job_id=‹integer›

Returns only events for the specified job ID.

job_type=‹string›

Returns only events for the specified job type

state=[running|paused_user|paused_system|paused_policy|paused_priority| cancelled_user|cancelled_system|failed|succeeded|unknown]

Return only the events for jobs that are in the specified state.

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of events that are available.	N/A
resume	String	Specifies the value of the resume argument for continuation calls.	N/A
id	String	Specifies the system-assigned ID for the reported job event.	events
job_id	Integer	Specifies the system-assigned ID for the job.	events
job_type	String	Specifies the job type.	events
message	String	Specifies a description of the event.	events
phase	Integer	Specifies the job phase number at the time of the reported event.	events
policy	String	Specifies the policy in effect for the job at the time of the event.	events

Property	Type	Description	Property of
progress	String	Specifies a human-readable description of the progress of the job. The value for this property is defined by each job implementation and can vary between the phases of the job.	events
running_time	Integer	Specifies how long the job will take to complete.	events
results	String	Specifies the job results.	events
time	Integer	Specifies the time of the reported event in seconds from UNIX Epoch.	events

Job statistics resource

Provides statistics about system jobs and workers across the cluster.

Operation	Method and URI
Get system job statistics	GET /platform/1/job/statistics
View the detailed JSON schema for this resource.	GET /platform/1/job/statistics?describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of job statistics that are available.	N/A
job_id	Integer	Specifies the system-assigned ID for the job.	jobs
nodes	Array	Specifies properties for the node.	jobs
cpu	Object	Specifies properties for the CPU.	nodes
average	Integer	Specifies the average CPU usage of the job on the node.	cpu
current	Integer	Specifies the current CPU usage of the job on the node.	cpu
maximum	Integer	Specifies the maximum CPU usage of the job on the node.	cpu
minimum	Integer	Specifies the minimum CPU usage of the job on the node.	cpu
io	Object	Specifies the input and output properties.	nodes
read	Object	Specifies the read properties.	io

Property	Type	Description	Property of
bytes	Integer	Specifies the number of bytes that were recently read by this job on this node.	read
ops	Integer	Specifies the number of read operations that were recently performed by this job on this node.	read
write	Object	Specifies the write properties.	io
bytes	Integer	Specifies the number of bytes that were recently written by this job on this node.	write
ops	Integer	Specifies the number of write operations that were recently performed by this job on this node.	write
memory	Object	Specifies properties for memory usage.	nodes
physical	Object	Specifies the properties for physical memory usage.	memory
average	Integer	Specifies the average physical memory usage of the job on the node in KB.	physical
current	Integer	Specifies the current physical memory usage of the job on this node in KB.	physical
maximum	Integer	Specifies the maximum physical memory usage of the job on this node in KB.	physical
minimum	Integer	Specifies the minimum physical memory usage of the job on this node in KB.	physical
virtual	Object	Specifies the properties for virtual memory usage.	memory
average	Integer	Specifies the average virtual memory usage of the job on the node in KB.	virtual
current	Integer	Specifies the current virtual memory usage of the job on this node in KB.	virtual
maximum	Integer	Specifies the maximum virtual memory usage of the job on this node in KB.	virtual
minimum	Integer	Specifies the minimum virtual memory usage of the job on this node in KB.	virtual
node	Integer	Specifies the devid of the node.	nodes
pid	Integer	Specifies the process ID of the node.	nodes

Property	Type	Description	Property of
total_workers	Integer	Specifies number of workers for this job on the node.	nodes
workers	Object	Specifies properties for the workers.	nodes
stw	Integer	Specifies the sleep-to-work ratio for the worker.	workers
task	String	Specifies a non-human-readable representation of the task the worker is processing.	workers
task_result	String	Specifies a non-human-readable representation of the task results that the worker produced.	workers
worker	Integer	Specifies a system-assigned ID to the worker.	workers
phase	Integer	Specifies the phase that the job is currently in.	nodes
total_node	Integer	Specifies the number of nodes that are participating in the job.	nodes

System job API examples

You can see examples for some system job API calls.

Modify a job type

You can modify a system job type.

Request example

```
PUT /platform/1/job/types/AVScan
Authorization Basic cm9vdDph

{
    'policy': 'MEDIUM',
    'enabled': True
}
```

Response example

```
204 No Content
Content-type: 'text/plain',
Allow: 'GET, PUT, HEAD'
```

Create a job policy

You can create a system job policy.

Request example

```
POST /platform/1/job/policies
Authorization Basic cm9vdDph

  {
    'intervals': [
```

Modify a system job

You can modify, cancel, pause, or resume a running system job.

Request example

```
PUT /platform/1/job/jobs/AVScan
Authorization Basic cm9vdDph

{
    'state': 'pause'
}
```

Response example

```
204 No Content
Content-type: 'text/plain',
Allow: 'GET, PUT, POST, HEAD'
```

CHAPTER 9

SyncIQ resources

This section contains the following topics:

SyncIQ backup and recovery overview

OneFS enables you to replicate data from one Isilon cluster to another through the SyncIQ software module. You must activate a SyncIQ license on both Isilon clusters before you can replicate data between them.

You can replicate data at the directory level while optionally excluding specific files and sub-directories from being replicated. SyncIQ creates and references snapshots to replicate a consistent point-in-time image of a root directory. Metadata such as access control lists (ACLs) and alternate data streams (ADS) are replicated along with data.

SyncIQ enables you to maintain a consistent backup copy of your data on another Isilon cluster. SyncIQ offers automated failover and failback capabilities that enable you to continue operations on another Isilon cluster if a primary cluster becomes unavailable.

Sync Resources

You can retrieve, create, modify, or delete resources for data replication with SyncIQ.

File matching patterns

You can apply the following file matching pattern to filter specific objects in SyncIQ.

```
<file_matching_pattern> := {
    "or_criteria" : [
        {
            "and_criteria": [
                <file_criterion>,
                <file_criterion>,
                ...
            ]
        },
        {
            "and_criteria": [
                <file_criterion>,
                <file_criterion>,
                ...
            ]
        },
        ...
    ]
}

<file_criterion> = {
 "type": <string>,
 "operator": <string>,
 "value": {<string> | <integer>}
}
```

The following table defines available operators.

operator	Description
==	Equal
!=	Does not equal
›	Greater than
›=	Greater than or equal

operator	Description
‹	Less than
‹=	Less than or equal
!	Not

The following table defines available file criteria types.

Type	Conditions
name	Paired with operators "==" or "!=".
path	Paired with operators "==" or "!=".
posix_regex_name	Paired with operators "==" or "!=".
accessed_time	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
accessed_before	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
accessed_after	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
birth_time	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
birth_before	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
birth_after	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
changed_time	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
changed_before	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
changed_after	No operator is required; every operation is set to "==". The value must be in the following form: {‹mm›/‹dd›/‹yyyy› [‹HH›:‹mm›] | ‹integer› {days | weeks | months | years} ago}
size	Paired with all operators except for "!".

Type	Conditions
	The value must be in the following form: An integer, followed by B, KB, MB, GB, or TB (such as 100B or 12TB).
file_type	Paired with operators "==" or "!=".
	The value must be in the following form: 'file', 'directory', or 'symlink'.
user_name	Paired with operators "==" or "!=".
user_id	Paired with operators "==" or "!=".
group_name	Paired with operators "==" or "!=".
group_id	Paired with operators "==" or "!=".
no_user	Paired with operators "!".
no_group	Paired with operators "!".
	Does not require a value.

The following example shows a sync policy filter.

```
"file_matching_filter": {
    "or_criteria" : [
        {
            "and_criteria": [
                {
                    "type": "size",
                    "operator": ">=",
                    "value": "500000KB"
                },
                {
                    "type": "file_type",
                    "operator": "==",
                    "value": "file"
                }
            ]
        },
        {
            "and_criteria": [
                {
                    "type": "posix_regex_name",
                    "operator": "==",
                    "value": "some_special_prefix_*"
                }
            ]
        },
        {
            "and_criteria": [
                {
                    "type": "file_type",
                    "operator": "==",
                    "value": "symlink"
                }
            ]
        }
    ]
}
```

Sync jobs resource

Applies the standard collection pattern to SyncIQ replication jobs.

Operation	Method and URI
Get a list of all replication jobs	GET /platform/1/sync/jobs
Get the details of a replication job	GET /platform/1/sync/jobs/‹job_id›
Start a replication job	POST /platform/1/sync/jobs
Modify an in-progress replication job	PUT /platform/1/sync/jobs/‹job_id›
View the detailed JSON schema for this resource	GET /platform/1/sync/jobs?describe

Query parameters

sort=‹string›

Order results by this field. The default value is id.

state=[scheduled|running|paused|finished|failed|canceled|needs_attention| unknown]

Return only those jobs that are in the specified state.

dir=[ASC|DESC]

Directions for the sort order are ascending (ASC) or descending (DESC). The default setting is ASC.

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of replication jobs available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
action	String	Specifies the action taken by the replication job. Options include resync_prep, allow_write, allow_write_revert, test, and run.	jobs
ads_streams_replicated	String	Specifies the number of streams that are created by the replication job.	jobs

Property	Type	Description	Property of
block_specs_replicated	Integer	Specifies the number of block specifications that are required by the replication job.	jobs
bytes_recoverable	Integer	Specifies the number of bytes that can be recovered by the replication job.	jobs
bytes_transferred	Integer	Specifies the number of bytes that were transferred by the replication job.	jobs
char_specs_replicated	Integer	Specifies the number of character specification files that are replicated by the replication job.	jobs
directories_replicated	Integer	Specifies the number of directories that are replicated by the replication job.	jobs
dirs_changed	Integer	Specifies the number of directories that were changed by the replication job.	jobs
dirs_deleted	Integer	Specifies the number of directories that were deleted by the replication job.	jobs
dirs_moved	Integer	Specifies the number of directories that were moved by the replication job.	jobs
dirs_new	Integer	Specifies the number of directories that were created by the replication job.	jobs
duration	Integer	Specifies the amount of time in seconds between the start and end of the replication job. If the replication job has not ended, this value is the amount of time since the replication job started. This field is null if the replication job has not started.	jobs
end_time	Integer	Specifies the time that the replication job ended in Unix EPOCH seconds. This field is null if the replication job has not ended.	jobs
error	String	Specifies the primary error message for the replication job.	jobs
errors	Array	Specifies a list of error messages for the replication job.	jobs

Property	Type	Description	Property of
error_checksum_files_skipped	Integer	Specifies the number of files with checksum errors that were skipped by the replication job.	jobs
error_io_files_skipped	Integer	Specifies the number of files with I/O errors that were skipped by the replication job.	jobs
error_net_files_skipped	Integer	Specifies the number of files with network errors that were skipped by the replication job.	jobs
failed_chunks	Integer	Specifies the number of data chunks that failed transmission.	jobs
fifos_replicated	Integer	Specifies the number of First In First Out (FIFO) files that were replicated by the replication job.	jobs
file_data_bytes	Integer	Specifies the number of bytes transferred from the source to target clusters.	jobs
files_changed	Integer	Specifies the number of files changed by the replication job.	jobs
files_linked	Integer	Specifies the number of files that are linked by the replication job.	jobs
files_new	Integer	Specifies the number of files created by the replication job.	jobs
files_selected	Integer	Specifies the number of files that are selected for replication before they are transferred.	jobs
files_transferred	Integer	Specifies the number of files that were transferred by the replication job.	jobs
files_unlinked	Integer	Specifies the number of files that were unlinked by the replication job.	jobs
files_with_ads_replicated	Integer	Specifies the number of files with ADS that were replicated by the replication job.	jobs
flipped_lins	Integer	Specifies the number of LINs that have changed between replication jobs.	jobs
hard_links_replicated	Integer	Specifies the number of hard links that were replicated by the replication job.	jobs
hash_exceptions_fixed	Integer	Specifies the number of hash exceptions that were fixed by the	jobs

Property	Type	Description	Property of
		replication job. Files that have changed on the target cluster for any reason may fail a hash check.	
hash_exceptions_found	Integer	Specifies the number of hash exceptions that were found by the replication job.	jobs
id	String	Specifies a unique identifier for the replication policy.	jobs
job_id	Integer	Specifies an ID for the replication job.	jobs
lins_total	Integer	Specifies the number of LINs that were transferred by the replication job.	jobs
network_bytes_to_source	Integer	Specifies the total number of bytes sent to the source cluster by the replication job.	jobs
network_bytes_to_target	Integer	Specifies the total number of bytes that were sent to the target cluster by the replication job.	jobs
new_files_replicated	Integer	Specifies the number of new files that were replicated by the replication job.	jobs
num_retransmitted_files	Integer	Specifies the number of files that were retransmitted by the replication job.	jobs
phases	Array	Specifies data for each phase of the replication job.	jobs
end_time	Integer	Specifies the time the replication job completed for this phase.	phases
phase	String	Specifies the phase that the replication job is in.	phases
start_time	Integer	Specifies the time that the replication job started for the phase.	phases
policy	Object	Specifies the replication policy that is associated with the replication job, or null if there is no associated replication policy with the replication job. Replication jobs without an associated replication policy might be newly created and unavailable in the underlying database.	jobs
action	String	Specifies the action taken by this replication policy. When set to `copy`, source files are copied to the target	policy

Property	Type	Description	Property of
		cluster. When set to `sync`, the source directory is replicated to the target directory. Files and directories that were deleted on the source cluster, moved within the target directory, or no longer match the selection criteria are deleted from the target directory.	
check_integrity	Boolean	Determines whether cyclic redundancy checks (CRC) are performed on the received data.	policy
conflicted	Boolean	Determines if the replication policy will start any scheduled replication jobs after encountering an error. If set to true, the replication policy will not start any more replication jobs until this field is set to false. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
description	String	Specifies a user-assigned description for the replication policy.	policy
disable_fofb	Boolean	Enables or disables data failover or failback. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
disable_stf	Boolean	Enables or disables the Snapshot Tracking File (STF) based data transfer through a file system scan for OneFS versions 6.5 or greater. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
enabled	Boolean	Determines if a replication job will automatically run based on a schedule for the replication policy.	policy
file_matching_pattern	String	Specifies a file matching pattern that can filter and search for a set of files	policy

Property	Type	Description	Property of
		with specific properties. For example, (a AND b) OR (x AND y).	
or_criteria	Array	Specifies an array that contains objects with and_criteria properties, each set of which is logically connected through the OR operator to create the full file matching pattern.	file_matching_pattern
and_criteria	Array	Specifies an array that contains individual file criteria objects, each of which describes one criterion. These values are connected logically through the AND operator to form a set a criteria.	or_criteria
items	Array	Specifies criteria for finding a file.	and_criteria
case_sensitive	Boolean	Determines if the value comparison is case sensitive. The default value is true.	items
attribute_exists	Boolean	Determines that a custom attribute specified in the field option is available. The default value is true.	items
field	String	Specifies the name of the file attribute to match. This field is only required if the attribute is a custom_attribute type. The default value is empty. Additionally, the attribute_exists parameter must be set to true.	items
operator	String	Specifies how to compare the attribute of each file to the value. For example, ==, !=, ›, ‹, ‹=, or !.	items
type	String	Specifies the type of file attribute criteria to match. For example, name, path, accessed_time, group_name, and so on.	items
value	String or Integer	Specifies the value that the specified attribute of each file is compared to.	items
whole_word	Boolean	Determines if the attribute will match the entire word. The default value is true.	items
force_interface	Boolean	Determines whether data is sent through only the subnet and pool that is specified in the `source_network` field. Set this option when there are multiple interfaces for the source subnet.	policy

Property	Type	Description	Property of
		When this option is enabled, the net.inet.ip.choose_ifa_by_ipsrc sysctl must also be set. **Note** This field should not be changed without the help of Isilon Technical Support.	
has_sync_state		Determines whether the replication policy has scanned the file system. When this field is set to false, the policy is reset. When this field is set to true, the policy is in progress.	policy
id	String	Specifies the replication policy ID. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	policy
last_job_state	String	Specifies the state of the most recent job for the replication policy.	policy
last_started	Integer	Specifies the last time a replication job was started for the replication policy. The value is null if the replication policy has never run.	policy
last_success	Integer	Specifies a timestamp of the last known successfully completed replication job. The value is null if no replication jobs were successfully completed for the replication policy.	policy
log_level	String	Specifies the severity an event must reach before the event is logged.	policy
log_removed_files	Boolean	Determines if the system will log any files or directories that were deleted due to a replication job.	policy
name	String	Specifies the user-assigned name of the replication policy.	policy
next_run	Integer	Specifies the next time the replication job is scheduled to run in Unix EPOCH seconds. This value is null if the replication job is unscheduled.	policy
password_set	Boolean	Indicates if a password is set for the target cluster. The password value is not shown in GET requests.	policy

Property	Type	Description	Property of
report_max_age	Integer	Specifies the length of time in seconds that a replication policy report is stored.	policy
report_max_count	Integer	Specifies the maximum number of replication policy reports that are stored on the system	policy
restrict_target_network	Boolean	Determines if a replication policy will connect to only nodes with a SmartConnect zone specified in the `target_host` parameter. If this value is set to false, replication policies are not restricted to specified nodes on the target cluster.	policy
schedule	String	Specifies a schedule for new replication jobs on a replication policy.	policy
source_exclude_directories	Array	Specifies the directories to exclude from a replication job. If you modify this field, a full or differential replication job is performed on all data on the source cluster.	policy
source_include_directories	Array	Specifies the directories to include in a replication job. If you modify this field, a full replication job is performed on all data on the source cluster.	policy
source_network	Object	Restricts replication policies on the local cluster to a specified subnet and pool.	policy
pool	String	Restricts replication policies to the specified pool.	source_network
subnet	String	Restricts replication policies to the specified subnet.	source_network
source_root_path	String	Specifies the root directory on the source cluster that files are replicated from. If you modify this field, a full replication job is performed on all data on the source cluster.	policy
source_snapshot	String	Specifies an optional snapshot that can be copied and replicated from.	
source_snapshot_archive	Boolean	Determines if archival snapshots of the source data are taken on the source cluster before a replication job. When this value is set to true, a snapshot is taken.	policy

Property	Type	Description	Property of
source_snapshot_expiration	Integer	Specifies the length of time in seconds to keep a snapshot on the source cluster before the snapshot is deleted.	policy
source_snapshot_pattern	String	Specifies the name pattern for snapshots that are taken on the source cluster before a replication job.	policy
target_compare_initial_sync	Boolean	Determines if the target cluster creates diffs against the original replication job. When this value is set to true, a diff is created.	policy
target_detect_modification	Boolean	Determines whether SyncIQ checks the target directory for modifications before replicating files.	policy
target_host	String	Specifies a hostname or IP address for the sync target cluster. The replication policy will not run if the target cluster host is modified and the new target does not match the current target association.	policy
target_path	String	Specifies an absolute file system path on the target cluster for the replication job.	policy
target_snapshot_alias	String	Specifies an alias for the snapshot taken on the target cluster after a replication job completes.	policy
target_snapshot_archive	Boolean	Determines if an archival snapshot of the target data is taken on the target cluster after a successful replication job is complete. When this value is set to true, the snapshot is taken.	policy
target_snapshot_expiration	Integer	Specifies the length of time in seconds to keep a snapshot on the target cluster before deleting the snapshot.	policy
target_snapshot_pattern	String	Specifies a snapshot naming pattern for snapshots that are taken on the target cluster after the replication job completes. For information on snapshot naming patterns, see the *OneFS CLI Administration Guide.*	policy
workers_per_node	Integer	Specifies the number of worker threads on a node that are performing a replication job. In a POST request, this parameter is only valid when the	policy

Property	Type	Description	Property of
		action property is set to `allow_write` or `allow_write_revert`.	
policy_action	String	Specifies the action the replication policy will perform. Options include: `sync` and `copy`.	jobs
policy_id	String	Specifies the system-assigned ID for the replication policy.	jobs
policy_name	String	Specifies the user-assigned name for the replication policy.	jobs
regular_files_replicated	Integer	Specifies the number of regular files that were replicated by the replication job.	jobs
retransmitted_files	String	Specifies the number of files that were retransmitted by the replication job. Files are retransmitted if they fail a hash check or are missing from the target cluster for any reason.	jobs
retry	Integer	Specifies the number of times the replication job was retried.	jobs
sockets_replicated	Integer	Specifies the number of sockets that are being replicated by the replication job.	jobs
source_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the source cluster.	jobs
source_directories_created	Integer	Specifies the number of directories that were created on the source cluster.	jobs
source_directories_deleted	Integer	Specifies the number of directories that were deleted on the source cluster.	jobs
source_directories_linked	Integer	Specifies the number of directories that are linked on the source cluster.	jobs
source_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the source cluster.	jobs
source_directories_visited	Integer	Specifies the number of source directories that were processed in the initial replication job.	jobs
source_files_deleted	Integer	Specifies the number of files that were deleted on the source cluster.	jobs

Property	Type	Description	Property of
source_files_linked	Integer	Specifies the number of files that are linked on the source cluster.	jobs
source_files_unlinked	Integer	Specifies the number of files that are unlinked on the source cluster.	jobs
sparse_data_bytes	Integer	Specifies the number of sparse data bytes that were transferred by this replication job.	jobs
start_time	Integer	Specifies the time the replication job started in Unix EPOCH seconds. This field is null if the replication job has not started.	jobs
state	String	Specifies the state of the replication job. Options include: `scheduled`, `running`, `paused`, `finished`, `failed`, `canceled`, `needs_attention`, and `unknown`.	jobs
symlinks_replicated	Integer	Specifies the number of symlinks that are replicated by the replication job.	jobs
sync_type	Integer	Specifies the type of action performed by the job. Options include: `invalid`, `legacy`, `initial`, `incremental`, `upgrade`, `fofb`, and `domainmark`.	jobs
target_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the target cluster.	jobs
target_directories_created	Integer	Specifies the number of directories that were created on the target cluster.	jobs
target_directories_deleted	Integer	Specifies the number of directories that were deleted on the target cluster.	jobs
target_directories_linked	Integer	Specifies the number of directories that are linked on the target cluster.	jobs
target_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the target cluster.	jobs
target_files_deleted	Integer	Specifies the number of files that were deleted on the target cluster.	jobs
target_files_linked	Integer	Specifies the number of files that are linked on the target cluster.	jobs
target_files_unlinked	Integer	Specifies the number of files that are unlinked on the target cluster.	jobs

Property	Type	Description	Property of
target_snapshots	Array	Specifies list of the target snapshots created by this replication job.	jobs
total_chunks	Integer	Specifies the total number of data chunks that were transmitted by this replication job.	jobs
total_data_bytes	Integer	Specifies the total number of bytes transferred by the replication job.	jobs
total_files	Integer	Specifies the number of files that were changed by the replication job.	jobs
total_network_bytes	Integer	Specifies the total number of bytes that were sent over the network by the replication job.	jobs
total_phases	Integer	Specifies the total number of phases for the replication job.	jobs
unchanged_data_bytes	Integer	Specifies the number of bytes that were unchanged by the replication job.	jobs
up_to_date_files_skipped	Integer	Specifies the number of up-to-date files that are skipped by the replication job. These files were on the source cluster during a file system scan, but were not transferred because the file had not changed.	jobs
updated_files_replicated	Integer	Specifies the number of updates files that are replicated by the replication job.	jobs
user_conflict_files_skipped	Integer	Specifies the number of files with user conflicts that are skipped by the replication job.	jobs
warnings	Array	Specifies a list of warning messages for the replication job.	jobs
workers	Array	Specifies a list of workers for the replication job.	jobs
connected	Boolean	Determines whether the source and target clusters are connected on the network.	workers
last_split	Integer	Specifies the time for when the last network split occurred in UNIX time.	workers
last_work	Integer	Specifies the time for when the workers last received a replication job in UNIX time.	workers

Property	Type	Description	Property of
lin	Integer	Specifies the LIN that the replication job is performing an operation on.	workers
process_id	Integer	Specifies a process ID for each worker.	workers
source_host	Integer	Specifies the source hostname for each worker.	workers
target_host	Integer	Specifies the target hostname for each worker.	workers
worker_id	Integer	Specifies an ID for each worker.	workers

Sync policies resource

Applies the standard collection pattern to SyncIQ replication policies.

Operation	Method and URI
Get all replication policies	GET /platform/1/sync/policies
Get a replication policy	GET /platform/1/sync/policies/‹policy›
Create a replication policy	POST /platform/1/sync/policies
Modify a replication policy	PUT /platform/1/sync/policies/‹policy›
Delete all replication policies	DELETE /platform/1/sync/policies
Delete a replication policy	DELETE /platform/1/sync/policies/‹policy›
View the detailed JSON schema for this resource.	GET /platform/1/sync/policies?describe

Query parameters

sort=‹string›

Order results by this field. The default value is id.

scope=[user|effective]

Specifies which fields to return. The effective option returns all fields and the user option returns only fields with non-default values. If you do not specify the scope parameter, all fields are returned. The default value is effective.

dir=[ASC|DESC]

Directions for the sort order are ascending (ASC) or descending (DESC). The default setting is ASC.

local_only=‹Boolean›

Deletes the replication policy from only the source cluster. This parameter is useful if the target cluster is unavailable to have the replication policy removed.

force=‹Boolean›

Deletes only replication jobs that are not currently running.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
id	String	Provides the system ID assigned to the replication policy.	policies
conflicted	Boolean	If set to true, checks if the most recent run of the replication job failed because of a conflict with another replication job or because of incorrect settings. Conflicted policies will stop after a failure until the problem is fixed and the conflicted flag is removed.	policies
action	String	If set to *copy*, source files are copied to the target cluster. If set to *sync*, files and directories that were deleted on the source cluster and files that no longer match the selection criteria are deleted from the target directory.	policies
name	String	Specifies the user-assigned name for the replication policy.	policies
check_integrity	Boolean	If set to true, determines if the data was transmitted correctly across the network. If the transfer fails, the replication job fails and the error is logged. If set to false, no check is performed.	policies
description	String	Provides the user-defined description of the replication policy.	policies
enabled	Boolean	If set to true, replication jobs are automatically run based on the associated replication policy and schedule. If set to false, replication jobs are only performed when manually triggered.	policies
file_matching_pattern	Array	Specifies criteria that determines which files are selected for transfer.	policies
source_root_path	String	Specifies the root directory on the source cluster for the replication job.	policies
source_include_directories	Array	Specifies the directories that are included in the replication job.	policies

Property	Type	Description	Property of
source_exclude_directories	Array	Specifies the directories that are excluded from the replication job.	policies
target_path	String	Specifies the destination file system path on the target cluster for the replication job.	policies
target_snapshot	Boolean	If set to true, archival snapshots of the data are taken on the target cluster after a successful replication job completes. If set to false, no snapshots are taken.	policies
target_detect_modifications	Boolean	If set to true, SyncIQ detects if files were changed on the target cluster and resends all modified files.	policies
schedule	String	Specifies a schedule that determines when replication jobs should run for a replication policy.	policies
log_level	String	Provides the severity level that an event must reach before the event is logged.	policies
log_removed_files	Boolean	If set to true, the system logs any files or directories that are deleted during a replication job. If set to false, no deleted files are logged.	policies
report_max_age	Integer	Specifies the length of time, in seconds, that a replication policy report is stored.	policies
report_max_count	Integer	Specifies the maximum number of replication policy reports that can be stored on the cluster.	policies
source_network	Object	Restricts replication policies on the local cluster to the specified subnet and pool.	policies
restrict_target_network	Boolean	If set to true, limits the replication policy to nodes that are in the target zone name. If set to false, the replication policy applies to all available nodes in the target cluster.	policies
target_compare_initial_sync	Boolean	If set to true, files on the target cluster are compared against the source cluster during the initial replication job, and missing files are transferred.	policies
last_success	Integer	Species a timestamp for when the last known successful replication job completed.	policies

Property	Type	Description	Property of
snapshot_alias	String	Specifies the alias of the snapshot taken on the target cluster after the replication job completes.	policies
snapshot_pattern	String	Specifies the naming pattern for snapshots taken on the target cluster after the replication job completes.	policies
snapshot_expiration	Integer	Specifies the length of time in seconds that snapshots are kept on the target cluster.	policies
snapshot_rename_pattern	String	Specifies the naming pattern for snapshots taken on the source cluster before a replication job.	policies
snapshot_rename_expiration	Integer	Specifies the length of time in seconds that snapshots are kept on the source cluster.	policies
workers_per_node	Integer	Specifies the number of worker processes on a node that are performing a replication job.	policies
source_host	String	Specifies the hostname or IP address of a source cluster for a replication job.	policies
source_cluster_grid	String	Specifies the globally unique identifier for the source cluster.	policies

Sync policies reset resource

Resets the incremental state of a replication policy and forces a full sync or copy. You must post an empty object: {} to reset the policy.

Operation	Method and URI
Reset a replication policy.	POST /platform/1/sync/policy/‹policy›/reset
View the detailed JSON schema for this resource.	GET /platform/1/sync/policy/‹policy›/reset? describe

Query parameters
There are no parameters for this resource.

Object properties
There are no properties for this resource.

Sync reports resource

Applies the standard collection pattern to SyncIQ reports.

Operation	Method and URI
Get all replication reports	GET /platform/1/sync/reports
Get a replication report	GET /platform/1/sync/report/‹report-id›
View the detailed JSON schema for this resource.	GET /platform/1/sync/report?describe

Query parameters

sort=‹string›

Order results by this field. The default value is id.

policy_name=‹string›

Return only those reports that have the specified replication policy name.

state=[scheduled|running|paused|finished|failed|canceled|needs_attention|unknown]

Return only those reports whose replication jobs are in the specified state.

dir=[ASC|DESC]

Directions for the sort order are ascending (ASC) or descending (DESC). The default setting is ASC.

newer_than=‹integer›

Return only those reports for replication jobs that started before the specified number of days.

reports_per_policy=‹integer›

Return only the specified number of reports per replication policy. Ten replication policies are returned by default.

limit=‹integer›

Return no more than this many results at one time (see resume).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of replication jobs available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
action	String	Specifies the action taken by the replication job. Options include resync_prep, allow_write,	reports

Property	Type	Description	Property of
		`allow_write_revert`, `test`, and `run`.	
ads_streams_replicated	String	Specifies the number of streams that are created by the replication job.	reports
block_specs_replicated	Integer	Specifies the number of block specifications that are required by the replication job.	reports
bytes_recoverable	Integer	Specifies the number of bytes that can be recovered by the replication job.	reports
bytes_transferred	Integer	Specifies the number of bytes that were transferred by the replication job.	reports
char_specs_replicated	Integer	Specifies the number of character specification files that are replicated by the replication job.	reports
directories_replicated	Integer	Specifies the number of directories that are replicated by the replication job.	reports
dirs_changed	Integer	Specifies the number of directories that were changed by the replication job.	reports
dirs_deleted	Integer	Specifies the number of directories that were deleted by the replication job.	reports
dirs_moved	Integer	Specifies the number of directories that were moved by the replication job.	reports
dirs_new	Integer	Specifies the number of directories that were created by the replication job.	reports
duration	Integer	Specifies the amount of time in seconds between the start and end of the replication job. If the replication job has not ended, this value is the amount of time since the replication job started. This field is null if the replication job has not started.	reports
end_time	Integer	Specifies the time that the replication job ended in Unix EPOCH seconds. This field is null if the replication job has not ended.	reports

Property	Type	Description	Property of
error	String	Specifies the primary error message for the replication job.	reports
errors	Array	Specifies a list of error messages for the replication job.	reports
error_checksum_files_skipped	Integer	Specifies the number of files with checksum errors that were skipped by the replication job.	reports
error_io_files_skipped	Integer	Specifies the number of files with I/O errors that were skipped by the replication job.	reports
error_net_files_skipped	Integer	Specifies the number of files with network errors that were skipped by the replication job.	reports
failed_chunks	Integer	Specifies the number of data chunks that failed transmission.	reports
fifos_replicated	Integer	Specifies the number of First In First Out (FIFO) files that were replicated by the replication job.	reports
file_data_bytes	Integer	Specifies the number of bytes transferred from the source to target clusters.	reports
files_changed	Integer	Specifies the number of files changed by the replication job.	reports
files_linked	Integer	Specifies the number of files that are linked by the replication job.	reports
files_new	Integer	Specifies the number of files created by the replication job.	reports
files_selected	Integer	Specifies the number of files that are selected for replication before they are transferred.	reports
files_transferred	Integer	Specifies the number of files that were transferred by the replication job.	reports
files_unlinked	Integer	Specifies the number of files that were unlinked by the replication job.	reports
files_with_ads_replicated	Integer	Specifies the number of files with ADS that were replicated by the replication job.	reports
flipped_lins	Integer	Specifies the number of LINs that have changed between replication jobs.	reports

Property	Type	Description	Property of
hard_links_replicated	Integer	Specifies the number of hard links that were replicated by the replication job.	reports
hash_exceptions_fixed	Integer	Specifies the number of hash exceptions that were fixed by the replication job. Files that have changed on the target cluster for any reason may fail a hash check.	reports
hash_exceptions_found	Integer	Specifies the number of hash exceptions that were found by the replication job.	reports
id	String	Specifies a unique identifier for the replication policy.	reports
job_id	Integer	Specifies an ID for the replication job.	reports
lins_total	Integer	Specifies the number of LINs that were transferred by the replication job.	reports
network_bytes_to_source	Integer	Specifies the total number of bytes sent to the source cluster by the replication job.	reports
network_bytes_to_target	Integer	Specifies the total number of bytes that were sent to the target cluster by the replication job.	reports
new_files_replicated	Integer	Specifies the number of new files that were replicated by the replication job.	reports
num_retransmitted_files	Integer	Specifies the number of files that were retransmitted by the replication job.	reports
phases	Array	Specifies data for each phase of the replication job.	reports
end_time	Integer	Specifies the time the replication job completed for this phase.	phases
phase	String	Specifies the phase that the replication job is in.	phases
start_time	Integer	Specifies the time that the replication job started for the phase.	phases
action	String	Specifies the action taken by this replication policy. When set to `copy`, source files are copied to the target cluster. When set to `sync`, the source directory is replicated to the target directory. Files and directories that	policy

Property	Type	Description	Property of
		were deleted on the source cluster, moved within the target directory, or no longer match the selection criteria are deleted from the target directory.	
check_integrity	Boolean	Determines whether cyclic redundancy checks (CRC) are performed on the received data.	policy
conflicted	Boolean	Determines if the replication policy will start any scheduled replication jobs after encountering an error. If set to true, the replication policy will not start any more replication jobs until this field is set to false. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
description	String	Specifies a user-assigned description for the replication policy.	policy
disable_fofb	Boolean	Enables or disables data failover or failback. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
disable_stf	Boolean	Enables or disables the Snapshot Tracking File (STF) based data transfer through a file system scan for OneFS versions 6.5 or greater. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
enabled	Boolean	Determines if a replication job will automatically run based on a schedule for the replication policy.	policy
file_matching_pattern	String	Specifies a file matching pattern that can filter and search for a set of files with specific properties. For example, (a AND b) OR (x AND y).	policy

Property	Type	Description	Property of
or_criteria	Array	Specifies an array that contains objects with and_criteria properties, each set of which is logically connected through the OR operator to create the full file matching pattern.	file_matching_pattern
and_criteria	Array	Specifies an array that contains individual file criteria objects, each of which describes one criterion. These values are connected logically through the AND operator to form a set a criteria.	or_criteria
items	Array	Specifies criteria for finding a file.	and_criteria
case_sensitive	Boolean	Determines if the value comparison is case sensitive. The default value is true.	items
attribute_exists	Boolean	Determines that a custom attribute specified in the field option is available. The default value is true.	items
field	String	Specifies the name of the file attribute to match. This field is only required if the attribute is a custom_attribute type. The default value is empty. Additionally, the attribute_exists parameter must be set to true.	items
operator	String	Specifies how to compare the attribute of each file to the value. For example, ==, !=, ›, ‹, <=, or !.	items
type	String	Specifies the type of file attribute criteria to match. For example, name, path, accessed_time, group_name, and so on.	items
value	String or Integer	Specifies the value that the specified attribute of each file is compared to.	items
whole_word	Boolean	Determines if the attribute will match the entire word. The default value is true.	items
force_interface	Boolean	Determines whether data is sent through only the subnet and pool that is specified in the `source_network` field. Set this option when there are multiple interfaces for the source subnet. When this option is enabled, the net.inet.ip.choose_ifa_by_ipsrc sysctl must also be set.	policy

Property	Type	Description	Property of
		Note This field should not be changed without the help of Isilon Technical Support.	
has_sync_state		Determines whether the replication policy has scanned the file system. When this field is set to false, the policy is reset. When this field is set to true, the policy is in progress.	policy
id	String	Specifies the replication policy ID. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	policy
last_job_state	String	Specifies the state of the most recent job for the replication policy.	policy
last_started	Integer	Specifies the last time a replication job was started for the replication policy. The value is null if the replication policy has never run.	policy
last_success	Integer	Specifies a timestamp of the last known successfully completed replication job. The value is null if no replication jobs were successfully completed for the replication policy.	policy
log_level	String	Specifies the severity an event must reach before the event is logged.	policy
log_removed_files	Boolean	Determines if the system will log any files or directories that were deleted due to a replication job.	policy
name	String	Specifies the user-assigned name of the replication policy.	policy
next_run	Integer	Specifies the next time the replication job is scheduled to run in Unix EPOCH seconds. This value is null if the replication job is unscheduled.	policy
password_set	Boolean	Indicates if a password is set for the target cluster. The password value is not shown in GET requests.	policy
report_max_age	Integer	Specifies the length of time in seconds that a replication policy report is stored.	policy

Property	Type	Description	Property of
report_max_count	Integer	Specifies the maximum number of replication policy reports that are stored on the system	policy
restrict_target_network	Boolean	Determines if a replication policy will connect to only nodes with a SmartConnect zone specified in the `target_host` parameter. If this value is set to false, replication policies are not restricted to specified nodes on the target cluster.	policy
schedule	String	Specifies a schedule for new replication jobs on a replication policy.	policy
source_exclude_directories	Array	Specifies the directories to exclude from a replication job. If you modify this field, a full or differential replication job is performed on all data on the source cluster.	policy
source_include_directories	Array	Specifies the directories to include in a replication job. If you modify this field, a full replication job is performed on all data on the source cluster.	policy
source_network	Object	Restricts replication policies on the local cluster to a specified subnet and pool.	policy
pool	String	Restricts replication policies to the specified pool.	source_network
subnet	String	Restricts replication policies to the specified subnet.	source_network
source_root_path	String	Specifies the root directory on the source cluster that files are replicated from. If you modify this field, a full replication job is performed on all data on the source cluster.	policy
source_snapshot_archive	Boolean	Determines if archival snapshots of the source data are taken on the source cluster before a replication job. When this value is set to true, a snapshot is taken.	policy
source_snapshot_expiration	Integer	Specifies the length of time in seconds to keep a snapshot on the source cluster before the snapshot is deleted.	policy

Property	Type	Description	Property of
source_snapshot_pattern	String	Specifies the name pattern for snapshots that are taken on the source cluster before a replication job.	policy
target_compare_initial_sync	Boolean	Determines if the target cluster creates diffs against the original replication job. When this value is set to true, a diff is created.	policy
target_detect_modification	Boolean	Determines whether SyncIQ checks the target directory for modifications before replicating files.	policy
target_host	String	Specifies a hostname or IP address for the sync target cluster. The replication policy will not run if the target cluster host is modified and the new target does not match the current target association.	policy
target_path	String	Specifies an absolute file system path on the target cluster for the replication job.	policy
target_snapshot_alias	String	Specifies an alias for the snapshot taken on the target cluster after a replication job completes.	policy
target_snapshot_archive	Boolean	Determines if an archival snapshot of the target data is taken on the target cluster after a successful replication job is complete. When this value is set to true, the snapshot is taken.	policy
target_snapshot_expiration	Integer	Specifies the length of time in seconds to keep a snapshot on the target cluster before deleting the snapshot.	policy
target_snapshot_pattern	String	Specifies a snapshot naming pattern for snapshots that are taken on the target cluster after the replication job completes. For information on snapshot naming patterns, see the *OneFS CLI Administration Guide*.	policy
workers_per_node	Integer	Specifies the number of worker threads on a node that are performing a replication job. In a POST request, this parameter is only valid when the action property is set to `allow_write` or `allow_write_revert`.	policy

Property	Type	Description	Property of
policy_action	String	Specifies the action the replication policy will perform. Options include: `sync` and `copy`.	reports
policy_id	String	Specifies the system-assigned ID for the replication policy.	reports
policy_name	String	Specifies the user-assigned name for the replication policy.	reports
regular_files_replicated	Integer	Specifies the number of regular files that were replicated by the replication job.	reports
retransmitted_files	String	Specifies the number of files that were retransmitted by the replication job. Files are retransmitted if they fail a hash check or are missing from the target cluster for any reason.	reports
retry	Integer	Specifies the number of times the replication job was retried.	reports
sockets_replicated	Integer	Specifies the number of sockets that are being replicated by the replication job.	reports
source_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the source cluster.	reports
source_directories_created	Integer	Specifies the number of directories that were created on the source cluster.	reports
source_directories_deleted	Integer	Specifies the number of directories that were deleted on the source cluster.	reports
source_directories_linked	Integer	Specifies the number of directories that are linked on the source cluster.	reports
source_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the source cluster.	reports
source_directories_visited	Integer	Specifies the number of source directories that were processed in the initial replication job.	reports
source_files_deleted	Integer	Specifies the number of files that were deleted on the source cluster.	reports
source_files_linked	Integer	Specifies the number of files that are linked on the source cluster.	reports
source_files_unlinked	Integer	Specifies the number of files that are unlinked on the source cluster.	reports

Property	Type	Description	Property of
sparse_data_bytes	Integer	Specifies the number of sparse data bytes that were transferred by this replication job.	reports
start_time	Integer	Specifies the time the replication job started in Unix EPOCH seconds. This field is null if the replication job has not started.	reports
state	String	Specifies the state of the replication job. Options include: `scheduled`, `running`, `paused`, `finished`, `failed`, `canceled`, `needs_attention`, and `unknown`.	reports
subreport_count	Integer	Specifies the number of subreports that are available for the replication job.	reports
symlinks_replicated	Integer	Specifies the number of symlinks that are replicated by the replication job.	reports
sync_type	Integer	Specifies the type of action performed by the job. Options include: `invalid`, `legacy`, `initial`, `incremental`, `upgrade`, `fofb`, and `domainmark`.	reports
target_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the target cluster.	reports
target_directories_created	Integer	Specifies the number of directories that were created on the target cluster.	reports
target_directories_deleted	Integer	Specifies the number of directories that were deleted on the target cluster.	reports
target_directories_linked	Integer	Specifies the number of directories that are linked on the target cluster.	reports
target_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the target cluster.	reports
target_files_deleted	Integer	Specifies the number of files that were deleted on the target cluster.	reports
target_files_linked	Integer	Specifies the number of files that are linked on the target cluster.	reports
target_files_unlinked	Integer	Specifies the number of files that are unlinked on the target cluster.	reports

Property	Type	Description	Property of
target_snapshots	Array	Specifies list of the target snapshots created by this replication job.	reports
total_chunks	Integer	Specifies the total number of data chunks that were transmitted by this replication job.	reports
total_data_bytes	Integer	Specifies the total number of bytes transferred by the replication job.	reports
total_files	Integer	Specifies the number of files that were changed by the replication job.	reports
total_network_bytes	Integer	Specifies the total number of bytes that were sent over the network by the replication job.	reports
total_phases	Integer	Specifies the total number of phases for the replication job.	reports
unchanged_data_bytes	Integer	Specifies the number of bytes that were unchanged by the replication job.	reports
up_to_date_files_skipped	Integer	Specifies the number of up-to-date files that are skipped by the replication job. These files were on the source cluster during a file system scan, but were not transferred because the file had not changed.	reports
updated_files_replicated	Integer	Specifies the number of updates files that are replicated by the replication job.	reports
user_conflict_files_skipped	Integer	Specifies the number of files with user conflicts that are skipped by the replication job.	reports
warnings	Array	Specifies a list of warning messages for the replication job.	reports

Sync reports subreports resource

Applies the standard collection pattern to subreports about replication jobs.

Operation	Method and URI
Get all subreports for a single report	GET /platform/1/sync/reports/‹ID›/subreports
Get a subreport for a single report	GET /platform/1/sync/reports/‹ID›/subreports/‹SID›

Operation	Method and URI
View the detailed JSON schema for this resource.	GET /platform/1/sync/reports/‹ID›/subreports? describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are `ascending` (ASC) or `descending` (DESC). The default setting is `ascending`.

newer_than=‹integer›

Return only those subreports for replication jobs that started before the specified number of days.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of replication jobs available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
action	String	Specifies the action taken by the replication job. Options include `resync_prep`, `allow_write`, `allow_write_revert`, `test`, and `run`.	subreports
ads_streams_replicated	String	Specifies the number of streams that are created by the replication job.	subreports
block_specs_replicated	Integer	Specifies the number of block specifications that are required by the replication job.	subreports
bytes_recoverable	Integer	Specifies the number of bytes that can be recovered by the replication job.	subreports
bytes_transferred	Integer	Specifies the number of bytes that were transferred by the replication job.	subreports

Property	Type	Description	Property of
char_specs_replicated	Integer	Specifies the number of character specification files that are replicated by the replication job.	subreports
directories_replicated	Integer	Specifies the number of directories that are replicated by the replication job.	subreports
dirs_changed	Integer	Specifies the number of directories that were changed by the replication job.	subreports
dirs_deleted	Integer	Specifies the number of directories that were deleted by the replication job.	subreports
dirs_moved	Integer	Specifies the number of directories that were moved by the replication job.	subreports
dirs_new	Integer	Specifies the number of directories that were created by the replication job.	subreports
duration	Integer	Specifies the amount of time in seconds between the start and end of the replication job. If the replication job has not ended, this value is the amount of time since the replication job started. This field is null if the replication job has not started.	subreports
end_time	Integer	Specifies the time that the replication job ended in Unix EPOCH seconds. This field is null if the replication job has not ended.	subreports
error	String	Specifies the primary error message for the replication job.	subreports
errors	Array	Specifies a list of error messages for the replication job.	subreports
error_checksum_files_skipped	Integer	Specifies the number of files with checksum errors that were skipped by the replication job.	subreports
error_io_files_skipped	Integer	Specifies the number of files with I/O errors that were skipped by the replication job.	subreports
error_net_files_skipped	Integer	Specifies the number of files with network errors that were skipped by the replication job.	subreports
failed_chunks	Integer	Specifies the number of data chunks that failed transmission.	subreports

Property	Type	Description	Property of
fifos_replicated	Integer	Specifies the number of First In First Out (FIFO) files that were replicated by the replication job.	subreports
file_data_bytes	Integer	Specifies the number of bytes transferred from the source to target clusters.	subreports
files_changed	Integer	Specifies the number of files changed by the replication job.	subreports
files_linked	Integer	Specifies the number of files that are linked by the replication job.	subreports
files_new	Integer	Specifies the number of files created by the replication job.	subreports
files_selected	Integer	Specifies the number of files that are selected for replication before they are transferred.	subreports
files_transferred	Integer	Specifies the number of files that were transferred by the replication job.	subreports
files_unlinked	Integer	Specifies the number of files that were unlinked by the replication job.	subreports
files_with_ads_replicated	Integer	Specifies the number of files with ADS that were replicated by the replication job.	subreports
flipped_lins	Integer	Specifies the number of LINs that have changed between replication jobs.	subreports
hard_links_replicated	Integer	Specifies the number of hard links that were replicated by the replication job.	subreports
hash_exceptions_fixed	Integer	Specifies the number of hash exceptions that were fixed by the replication job. Files that have changed on the target cluster for any reason may fail a hash check.	subreports
hash_exceptions_found	Integer	Specifies the number of hash exceptions that were found by the replication job.	subreports
id	String	Specifies a unique identifier for the replication policy.	subreports
job_id	Integer	Specifies an ID for the replication job.	subreports

Property	Type	Description	Property of
lins_total	Integer	Specifies the number of LINs that were transferred by the replication job.	subreports
network_bytes_to_source	Integer	Specifies the total number of bytes sent to the source cluster by the replication job.	subreports
network_bytes_to_target	Integer	Specifies the total number of bytes that were sent to the target cluster by the replication job.	subreports
new_files_replicated	Integer	Specifies the number of new files that were replicated by the replication job.	subreports
num_retransmitted_files	Integer	Specifies the number of files that were retransmitted by the replication job.	subreports
phases	Array	Specifies data for each phase of the replication job.	subreports
end_time	Integer	Specifies the time the replication job completed for this phase.	phases
phase	String	Specifies the phase that the replication job is in.	phases
start_time	Integer	Specifies the time that the replication job started for the phase.	phases
action	String	Specifies the action taken by this replication policy. When set to `copy`, source files are copied to the target cluster. When set to `sync`, the source directory is replicated to the target directory. Files and directories that were deleted on the source cluster, moved within the target directory, or no longer match the selection criteria are deleted from the target directory.	policy
check_integrity	Boolean	Determines whether cyclic redundancy checks (CRC) are performed on the received data.	policy
conflicted	Boolean	Determines if the replication policy will start any scheduled replication jobs after encountering an error. If set to true, the replication policy will not start any more replication jobs until this field is set to false.	policy

Property	Type	Description	Property of
		Note This field should not be changed without the help of Isilon Technical Support.	
description	String	Specifies a user-assigned description for the replication policy.	policy
disable_fofb	Boolean	Enables or disables data failover or failback. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
disable_stf	Boolean	Enables or disables the Snapshot Tracking File (STF) based data transfer through a file system scan for OneFS versions 6.5 or greater. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
enabled	Boolean	Determines if a replication job will automatically run based on a schedule for the replication policy.	policy
file_matching_pattern	String	Specifies a file matching pattern that can filter and search for a set of files with specific properties. For example, (a AND b) OR (x AND y).	policy
or_criteria	Array	Specifies an array that contains objects with and_criteria properties, each set of which is logically connected through the OR operator to create the full file matching pattern.	file_matching_pattern
and_criteria	Array	Specifies an array that contains individual file criteria objects, each of which describes one criterion. These values are connected logically through the AND operator to form a set a criteria.	or_criteria
items	Array	Specifies criteria for finding a file.	and_criteria

Property	Type	Description	Property of
case_sensitive	Boolean	Determines if the value comparison is case sensitive. The default value is true.	items
attribute_exists	Boolean	Determines that a custom attribute specified in the field option is available. The default value is true.	items
field	String	Specifies the name of the file attribute to match. This field is only required if the attribute is a custom_attribute type. The default value is empty. Additionally, the attribute_exists parameter must be set to true.	items
operator	String	Specifies how to compare the attribute of each file to the value. For example, ==, !=, ›, ‹, ‹=, or !.	items
type	String	Specifies the type of file attribute criteria to match. For example, name, path, accessed_time, group_name, and so on.	items
value	String or Integer	Specifies the value that the specified attribute of each file is compared to.	items
whole_word	Boolean	Determines if the attribute will match the entire word. The default value is true.	items
force_interface	Boolean	Determines whether data is sent through only the subnet and pool that is specified in the `source_network` field. Set this option when there are multiple interfaces for the source subnet. When this option is enabled, the net.inet.ip.choose_ifa_by_ipsrc sysctl must also be set. **Note** This field should not be changed without the help of Isilon Technical Support.	policy
has_sync_state		Determines whether the replication policy has scanned the file system. When this field is set to false, the policy is reset. When this field is set to true, the policy is in progress.	policy

Property	Type	Description	Property of
id	String	Specifies the replication policy ID. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	policy
last_job_state	String	Specifies the state of the most recent job for the replication policy.	policy
last_started	Integer	Specifies the last time a replication job was started for the replication policy. The value is null if the replication policy has never run.	policy
last_success	Integer	Specifies a timestamp of the last known successfully completed replication job. The value is null if no replication jobs were successfully completed for the replication policy.	policy
log_level	String	Specifies the severity an event must reach before the event is logged.	policy
log_removed_files	Boolean	Determines if the system will log any files or directories that were deleted due to a replication job.	policy
name	String	Specifies the user-assigned name of the replication policy.	policy
next_run	Integer	Specifies the next time the replication job is scheduled to run in Unix EPOCH seconds. This value is null if the replication job is unscheduled.	policy
password_set	Boolean	Indicates if a password is set for the target cluster. The password value is not shown in GET requests.	policy
report_max_age	Integer	Specifies the length of time in seconds that a replication policy report is stored.	policy
report_max_count	Integer	Specifies the maximum number of replication policy reports that are stored on the system	policy
restrict_target_network	Boolean	Determines if a replication policy will connect to only nodes with a SmartConnect zone specified in the `target_host` parameter. If this value is set to false, replication policies are not restricted to specified nodes on the target cluster.	policy

Property	Type	Description	Property of
schedule	String	Specifies a schedule for new replication jobs on a replication policy.	policy
source_exclude_directories	Array	Specifies the directories to exclude from a replication job. If you modify this field, a full or differential replication job is performed on all data on the source cluster.	policy
source_include_directories	Array	Specifies the directories to include in a replication job. If you modify this field, a full replication job is performed on all data on the source cluster.	policy
source_network	Object	Restricts replication policies on the local cluster to a specified subnet and pool.	policy
pool	String	Restricts replication policies to the specified pool.	source_netw ork
subnet	String	Restricts replication policies to the specified subnet.	source_netw ork
source_root_path	String	Specifies the root directory on the source cluster that files are replicated from. If you modify this field, a full replication job is performed on all data on the source cluster.	policy
source_snapshot_archive	Boolean	Determines if archival snapshots of the source data are taken on the source cluster before a replication job. When this value is set to true, a snapshot is taken.	policy
source_snapshot_expiratio n	Integer	Specifies the length of time in seconds to keep a snapshot on the source cluster before the snapshot is deleted.	policy
source_snapshot_pattern	String	Specifies the name pattern for snapshots that are taken on the source cluster before a replication job.	policy
target_compare_initial_syn c	Boolean	Determines if the target cluster creates diffs against the original replication job. When this value is set to true, a diff is created.	policy
target_detect_modification	Boolean	Determines whether SyncIQ checks the target directory for modifications before replicating files.	policy

Property	Type	Description	Property of
target_host	String	Specifies a hostname or IP address for the sync target cluster. The replication policy will not run if the target cluster host is modified and the new target does not match the current target association.	policy
target_path	String	Specifies an absolute file system path on the target cluster for the replication job.	policy
target_snapshot_alias	String	Specifies an alias for the snapshot taken on the target cluster after a replication job completes.	policy
target_snapshot_archive	Boolean	Determines if an archival snapshot of the target data is taken on the target cluster after a successful replication job is complete. When this value is set to true, the snapshot is taken.	policy
target_snapshot_expiration	Integer	Specifies the length of time in seconds to keep a snapshot on the target cluster before deleting the snapshot.	policy
target_snapshot_pattern	String	Specifies a snapshot naming pattern for snapshots that are taken on the target cluster after the replication job completes. For information on snapshot naming patterns, see the *OneFS CLI Administration Guide.*	policy
workers_per_node	Integer	Specifies the number of worker threads on a node that are performing a replication job. In a POST request, this parameter is only valid when the action property is set to `allow_write` or `allow_write_revert`.	policy
policy_action	String	Specifies the action the replication policy will perform. Options include: `sync` and `copy`.	subreports
policy_id	String	Specifies the system-assigned ID for the replication policy.	subreports
policy_name	String	Specifies the user-assigned name for the replication policy.	subreports
regular_files_replicated	Integer	Specifies the number of regular files that were replicated by the replication job.	subreports

Property	Type	Description	Property of
retransmitted_files	String	Specifies the number of files that were retransmitted by the replication job. Files are retransmitted if they fail a hash check or are missing from the target cluster for any reason.	subreports
retry	Integer	Specifies the number of times the replication job was retried.	subreports
sockets_replicated	Integer	Specifies the number of sockets that are being replicated by the replication job.	subreports
source_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the source cluster.	subreports
source_directories_created	Integer	Specifies the number of directories that were created on the source cluster.	subreports
source_directories_deleted	Integer	Specifies the number of directories that were deleted on the source cluster.	subreports
source_directories_linked	Integer	Specifies the number of directories that are linked on the source cluster.	subreports
source_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the source cluster.	subreports
source_directories_visited	Integer	Specifies the number of source directories that were processed in the initial replication job.	subreports
source_files_deleted	Integer	Specifies the number of files that were deleted on the source cluster.	subreports
source_files_linked	Integer	Specifies the number of files that are linked on the source cluster.	subreports
source_files_unlinked	Integer	Specifies the number of files that are unlinked on the source cluster.	subreports
sparse_data_bytes	Integer	Specifies the number of sparse data bytes that were transferred by this replication job.	subreports
start_time	Integer	Specifies the time the replication job started in Unix EPOCH seconds. This field is null if the replication job has not started.	subreports
state	String	Specifies the state of the replication job. Options include: `scheduled`, `running`, `paused`, `finished`,	subreports

Property	Type	Description	Property of
		`failed`, `canceled`, `needs_attention`, and `unknown`.	
symlinks_replicated	Integer	Specifies the number of symlinks that are replicated by the replication job.	subreports
sync_type	Integer	Specifies the type of action performed by the job. Options include: `invalid`, `legacy`, `initial`, `incremental`, `upgrade`, `fofb`, and `domainmark`.	subreports
target_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the target cluster.	subreports
target_directories_created	Integer	Specifies the number of directories that were created on the target cluster.	subreports
target_directories_deleted	Integer	Specifies the number of directories that were deleted on the target cluster.	subreports
target_directories_linked	Integer	Specifies the number of directories that are linked on the target cluster.	subreports
target_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the target cluster.	subreports
target_files_deleted	Integer	Specifies the number of files that were deleted on the target cluster.	subreports
target_files_linked	Integer	Specifies the number of files that are linked on the target cluster.	subreports
target_files_unlinked	Integer	Specifies the number of files that are unlinked on the target cluster.	subreports
target_snapshots	Array	Specifies list of the target snapshots created by this replication job.	subreports
total_chunks	Integer	Specifies the total number of data chunks that were transmitted by this replication job.	subreports
total_data_bytes	Integer	Specifies the total number of bytes transferred by the replication job.	subreports
total_files	Integer	Specifies the number of files that were changed by the replication job.	subreports
total_network_bytes	Integer	Specifies the total number of bytes that were sent over the network by the replication job.	subreports

Property	Type	Description	Property of
total_phases	Integer	Specifies the total number of phases for the replication job.	subreports
unchanged_data_bytes	Integer	Specifies the number of bytes that were unchanged by the replication job.	subreports
up_to_date_files_skipped	Integer	Specifies the number of up-to-date files that are skipped by the replication job. These files were on the source cluster during a file system scan, but were not transferred because the file had not changed.	subreports
updated_files_replicated	Integer	Specifies the number of updates files that are replicated by the replication job.	subreports
user_conflict_files_skipped	Integer	Specifies the number of files with user conflicts that are skipped by the replication job.	subreports
warnings	Array	Specifies a list of warning messages for the replication job.	subreports

Sync reports rotate resource

Rotates the records in the database and periodically removes older reports from the system.

Operation	Method and URI
Retrieve information on whether the rotation is running.	GET /platform/1/sync/reports-rotate
Force the reports in the database to rotate.	POST /platform/1/sync/reports-rotate
View the detailed JSON schema for this resource.	GET /platform/1/sync/reports-rotate?describe

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
message	String	Reports if the replication reports are currently being rotated.	N/A
running	Boolean	Determines whether the replication reports are being rotated.	N/A

Sync target policies resource

Applies the standard collection pattern to SyncIQ target replication policies.

Operation	Method and URI
Get all target replication policies	GET /platform/1/sync/target/policies
Get a target replication policy	GET /platform/1/sync/target/policies/‹policy-id›
View the detailed JSON schema for this resource	GET /platform/1/sync/target/policies?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

target_path=‹string›

Return only those replication policies with the specified target path.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of replication policies available.	N/A
resume	String	Specifies the value of the resume argument for continuation calls.	N/A
failover_failback_state	String	Specifies the condition of the replication policy with respect to data failover/failback. Options include: `writes_disabled`, `enabling_writes`, `writes_enabled`, `disabling_writes`, `creating_resync_policy`, `resync_policy_created`.	policies
id	String	Specifies an ID for the replication policy.	policies

Property	Type	Description	Property of
last_job_state	String	Specifies the state of the last replication job run for the replication policy. Options include: `scheduled`, `running`, `paused`, `finished`, `failed`, `canceled`, `needs_attention`, and `unknown`.	policies
last_source_coordinator_ip	String	Specifies the IP address from which a SyncIQ coordinator daemon last connected to the cluster to update information about the job processes for this replication policy.	policies
last_update_from_source	Integer	Specifies the time in Unix EPOCH seconds that the cluster was last updated with information about the replication job from the source cluster for this replication policy. The value is set to null if no update has occurred yet.	policies
legacy_policy	Boolean	Indicates if the replication policy was defined by a OneFS version before 6.0. OneFS versions before 6.0 did not have the target replication policy concept, and canceling from the target side is unavailable	policies
name	String	Specifies the user-assigned name of the replication policy.	policies
source_cluster_guid	String	Specifies a unique identifier for the source cluster.	policies
source_host	String	Specifies the hostname or IP address of the replication source cluster.	policies
target_path	String	Specifies the absolute file system path on the target cluster for the replication job destination.	policies

Sync target policies cancel resource

Cancels the most recent replication job for a replication policy from the target cluster.

Operation	Method and URI
Cancel the most recent replication job	POST /platform/1/sync/target/policies/‹policy›/cancel
View the detailed JSON schema for this resource.	GET /platform/1/sync/target/policies/‹policy›/cancel?describe

Query parameters

There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	The unique identifier that refers to the item in the collection item resource path.	N/A

Sync target reports resource

Applies the standard collection pattern to replication reports running on a target cluster.

Operation	Method and URI
Get all replication target reports	GET /platform/1/sync/target/reports
Get a replication target report	GET /platform/1/sync/target/reports/‹report-id›
View the detailed JSON schema for this resource.	GET /platform/1/sync/target/reports?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

policy_name=‹string›

Return only those target reports that have the specified policy name.

state=[scheduled|running|paused|finished|failed|canceled|needs_attention| unknown]

Return only those target reports whose replication jobs are in the specified state.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

newer_than=‹integer›

Return only those reports with replication jobs that started before the specified number of days.

reports_per_policy=‹integer›

Return only the specified number of reports per replication policy. Ten reports are returned by default.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of replication jobs available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
action	String	Specifies the action taken by the replication job. Options include `resync_prep`, `allow_write`, `allow_write_revert`, `test`, and `run`.	reports
ads_streams_replicated	String	Specifies the number of streams that are created by the replication job.	reports
block_specs_replicated	Integer	Specifies the number of block specifications that are required by the replication job.	reports
bytes_recoverable	Integer	Specifies the number of bytes that can be recovered by the replication job.	reports
bytes_transferred	Integer	Specifies the number of bytes that were transferred by the replication job.	reports
char_specs_replicated	Integer	Specifies the number of character specification files that are replicated by the replication job.	reports
directories_replicated	Integer	Specifies the number of directories that are replicated by the replication job.	reports
dirs_changed	Integer	Specifies the number of directories that were changed by the replication job.	reports
dirs_deleted	Integer	Specifies the number of directories that were deleted by the replication job.	reports
dirs_moved	Integer	Specifies the number of directories that were moved by the replication job.	reports
dirs_new	Integer	Specifies the number of directories that were created by the replication job.	reports
duration	Integer	Specifies the amount of time in seconds between the start and end of the replication job. If the replication	reports

Property	Type	Description	Property of
		job has not ended, this value is the amount of time since the replication job started. This field is null if the replication job has not started.	
end_time	Integer	Specifies the time that the replication job ended in Unix EPOCH seconds. This field is null if the replication job has not ended.	reports
error	String	Specifies the primary error message for the replication job.	reports
errors	Array	Specifies a list of error messages for the replication job.	reports
error_checksum_files_skipped	Integer	Specifies the number of files with checksum errors that were skipped by the replication job.	reports
error_io_files_skipped	Integer	Specifies the number of files with I/O errors that were skipped by the replication job.	reports
error_net_files_skipped	Integer	Specifies the number of files with network errors that were skipped by the replication job.	reports
failed_chunks	Integer	Specifies the number of data chunks that failed transmission.	reports
fifos_replicated	Integer	Specifies the number of First In First Out (FIFO) files that were replicated by the replication job.	reports
file_data_bytes	Integer	Specifies the number of bytes transferred from the source to target clusters.	reports
files_changed	Integer	Specifies the number of files changed by the replication job.	reports
files_linked	Integer	Specifies the number of files that are linked by the replication job.	reports
files_new	Integer	Specifies the number of files created by the replication job.	reports
files_selected	Integer	Specifies the number of files that are selected for replication before they are transferred.	reports
files_transferred	Integer	Specifies the number of files that were transferred by the replication job.	reports

Property	Type	Description	Property of
files_unlinked	Integer	Specifies the number of files that were unlinked by the replication job.	reports
files_with_ads_replicated	Integer	Specifies the number of files with ADS that were replicated by the replication job.	reports
flipped_lins	Integer	Specifies the number of LINs that have changed between replication jobs.	reports
hard_links_replicated	Integer	Specifies the number of hard links that were replicated by the replication job.	reports
hash_exceptions_fixed	Integer	Specifies the number of hash exceptions that were fixed by the replication job. Files that have changed on the target cluster for any reason may fail a hash check.	reports
hash_exceptions_found	Integer	Specifies the number of hash exceptions that were found by the replication job.	reports
id	String	Specifies a unique identifier for the replication policy.	reports
job_id	Integer	Specifies an ID for the replication job.	reports
lins_total	Integer	Specifies the number of LINs that were transferred by the replication job.	reports
network_bytes_to_source	Integer	Specifies the total number of bytes sent to the source cluster by the replication job.	reports
network_bytes_to_target	Integer	Specifies the total number of bytes that were sent to the target cluster by the replication job.	reports
new_files_replicated	Integer	Specifies the number of new files that were replicated by the replication job.	reports
num_retransmitted_files	Integer	Specifies the number of files that were retransmitted by the replication job.	reports
phases	Array	Specifies data for each phase of the replication job.	reports
end_time	Integer	Specifies the time the replication job completed for this phase.	phases
phase	String	Specifies the phase that the replication job is in.	phases

Property	Type	Description	Property of
start_time	Integer	Specifies the time that the replication job started for the phase.	phases
policy_action	String	Specifies the action the replication policy will perform. Options include: sync and copy.	reports
policy_id	String	Specifies the system-assigned ID for the replication policy.	reports
policy_name	String	Specifies the user-assigned name for the replication policy.	reports
regular_files_replicated	Integer	Specifies the number of regular files that were replicated by the replication job.	reports
retransmitted_files	String	Specifies the number of files that were retransmitted by the replication job. Files are retransmitted if they fail a hash check or are missing from the target cluster for any reason.	reports
retry	Integer	Specifies the number of times the replication job was retried.	reports
sockets_replicated	Integer	Specifies the number of sockets that are being replicated by the replication job.	reports
source_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the source cluster.	reports
source_directories_created	Integer	Specifies the number of directories that were created on the source cluster.	reports
source_directories_deleted	Integer	Specifies the number of directories that were deleted on the source cluster.	reports
source_directories_linked	Integer	Specifies the number of directories that are linked on the source cluster.	reports
source_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the source cluster.	reports
source_directories_visited	Integer	Specifies the number of source directories that were processed in the initial replication job.	reports
source_files_deleted	Integer	Specifies the number of files that were deleted on the source cluster.	reports
source_files_linked	Integer	Specifies the number of files that are linked on the source cluster.	reports

Property	Type	Description	Property of
source_files_unlinked	Integer	Specifies the number of files that are unlinked on the source cluster.	reports
sparse_data_bytes	Integer	Specifies the number of sparse data bytes that were transferred by this replication job.	reports
start_time	Integer	Specifies the time the replication job started in Unix EPOCH seconds. This field is null if the replication job has not started.	reports
state	String	Specifies the state of the replication job. Options include: `scheduled`, `running`, `paused`, `finished`, `failed`, `canceled`, `needs_attention`, and `unknown`.	reports
subreport_count	Integer	Specifies the number of subreports that are available for the replication job.	reports
symlinks_replicated	Integer	Specifies the number of symlinks that are replicated by the replication job.	reports
sync_type	Integer	Specifies the type of action performed by the job. Options include: `invalid`, `legacy`, `initial`, `incremental`, `upgrade`, `fofb`, and `domainmark`.	reports
target_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the target cluster.	reports
target_directories_created	Integer	Specifies the number of directories that were created on the target cluster.	reports
target_directories_deleted	Integer	Specifies the number of directories that were deleted on the target cluster.	reports
target_directories_linked	Integer	Specifies the number of directories that are linked on the target cluster.	reports
target_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the target cluster.	reports
target_files_deleted	Integer	Specifies the number of files that were deleted on the target cluster.	reports
target_files_linked	Integer	Specifies the number of files that are linked on the target cluster.	reports

Property	Type	Description	Property of
target_files_unlinked	Integer	Specifies the number of files that are unlinked on the target cluster.	reports
target_path	String	Specifies the absolute file system path on the target cluster for the replication job.	reports
target_snapshots	Array	Specifies list of the target snapshots created by this replication job.	reports
total_chunks	Integer	Specifies the total number of data chunks that were transmitted by this replication job.	reports
total_data_bytes	Integer	Specifies the total number of bytes transferred by the replication job.	reports
total_files	Integer	Specifies the number of files that were changed by the replication job.	reports
total_network_bytes	Integer	Specifies the total number of bytes that were sent over the network by the replication job.	reports
total_phases	Integer	Specifies the total number of phases for the replication job.	reports
unchanged_data_bytes	Integer	Specifies the number of bytes that were unchanged by the replication job.	reports
up_to_date_files_skipped	Integer	Specifies the number of up-to-date files that are skipped by the replication job. These files were on the source cluster during a file system scan, but were not transferred because the file had not changed.	reports
updated_files_replicated	Integer	Specifies the number of updates files that are replicated by the replication job.	reports
user_conflict_files_skipped	Integer	Specifies the number of files with user conflicts that are skipped by the replication job.	reports
warnings	Array	Specifies a list of warning messages for the replication job.	reports

Sync target reports subreports resource

Applies the standard collection pattern to SyncIQ subreports for replication jobs on the target cluster.

Operation	Method and URI
Get all target subreports for a single report	GET /platform/1/sync/target/reports/‹ID›/subreports
Get a target subreport for a single report	GET /platform/1/sync/target/reports/‹ID›/subreports/‹SID›
View the detailed JSON schema for this resource.	GET /platform/1/sync/target/reports/‹ID›/subreports?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are `ascending` (ASC) or `descending` (DESC). The default setting is `ascending`.

state=[scheduled|running|paused|finished|failed|canceled|needs_attention|unknown]

Return only those subreports whose replication jobs are in the specified state.

newer_than=‹integer›

Return only those subreports for replication jobs that started before the specified number of days.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of replication jobs available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
action	String	Specifies the action taken by the replication job. Options include `resync_prep`, `allow_write`, `allow_write_revert`, `test`, and `run`.	subreports

Property	Type	Description	Property of
ads_streams_replicated	String	Specifies the number of streams that are created by the replication job.	subreports
block_specs_replicated	Integer	Specifies the number of block specifications that are required by the replication job.	subreports
bytes_recoverable	Integer	Specifies the number of bytes that can be recovered by the replication job.	subreports
bytes_transferred	Integer	Specifies the number of bytes that were transferred by the replication job.	subreports
char_specs_replicated	Integer	Specifies the number of character specification files that are replicated by the replication job.	subreports
directories_replicated	Integer	Specifies the number of directories that are replicated by the replication job.	subreports
dirs_changed	Integer	Specifies the number of directories that were changed by the replication job.	subreports
dirs_deleted	Integer	Specifies the number of directories that were deleted by the replication job.	subreports
dirs_moved	Integer	Specifies the number of directories that were moved by the replication job.	subreports
dirs_new	Integer	Specifies the number of directories that were created by the replication job.	subreports
duration	Integer	Specifies the amount of time in seconds between the start and end of the replication job. If the replication job has not ended, this value is the amount of time since the replication job started. This field is null if the replication job has not started.	subreports
end_time	Integer	Specifies the time that the replication job ended in Unix EPOCH seconds. This field is null if the replication job has not ended.	subreports
error	String	Specifies the primary error message for the replication job.	subreports
errors	Array	Specifies a list of error messages for the replication job.	subreports

Property	Type	Description	Property of
error_checksum_files_skipped	Integer	Specifies the number of files with checksum errors that were skipped by the replication job.	subreports
error_io_files_skipped	Integer	Specifies the number of files with I/O errors that were skipped by the replication job.	subreports
error_net_files_skipped	Integer	Specifies the number of files with network errors that were skipped by the replication job.	subreports
failed_chunks	Integer	Specifies the number of data chunks that failed transmission.	subreports
fifos_replicated	Integer	Specifies the number of First In First Out (FIFO) files that were replicated by the replication job.	subreports
file_data_bytes	Integer	Specifies the number of bytes transferred from the source to target clusters.	subreports
files_changed	Integer	Specifies the number of files changed by the replication job.	subreports
files_linked	Integer	Specifies the number of files that are linked by the replication job.	subreports
files_new	Integer	Specifies the number of files created by the replication job.	subreports
files_selected	Integer	Specifies the number of files that are selected for replication before they are transferred.	subreports
files_transferred	Integer	Specifies the number of files that were transferred by the replication job.	subreports
files_unlinked	Integer	Specifies the number of files that were unlinked by the replication job.	subreports
files_with_ads_replicated	Integer	Specifies the number of files with ADS that were replicated by the replication job.	subreports
flipped_lins	Integer	Specifies the number of LINs that have changed between replication jobs.	subreports
hard_links_replicated	Integer	Specifies the number of hard links that were replicated by the replication job.	subreports
hash_exceptions_fixed	Integer	Specifies the number of hash exceptions that were fixed by the	subreports

Property	Type	Description	Property of
		replication job. Files that have changed on the target cluster for any reason may fail a hash check.	
hash_exceptions_found	Integer	Specifies the number of hash exceptions that were found by the replication job.	subreports
id	String	Specifies a unique identifier for the replication policy.	subreports
job_id	Integer	Specifies an ID for the replication job.	subreports
lins_total	Integer	Specifies the number of LINs that were transferred by the replication job.	subreports
network_bytes_to_source	Integer	Specifies the total number of bytes sent to the source cluster by the replication job.	subreports
network_bytes_to_target	Integer	Specifies the total number of bytes that were sent to the target cluster by the replication job.	subreports
new_files_replicated	Integer	Specifies the number of new files that were replicated by the replication job.	subreports
num_retransmitted_files	Integer	Specifies the number of files that were retransmitted by the replication job.	subreports
phases	Array	Specifies data for each phase of the replication job.	subreports
end_time	Integer	Specifies the time the replication job completed for this phase.	phases
phase	String	Specifies the phase that the replication job is in.	phases
start_time	Integer	Specifies the time that the replication job started for the phase.	phases
policy_action	String	Specifies the action the replication policy will perform. Options include: sync and copy.	subreports
policy_id	String	Specifies the system-assigned ID for the replication policy.	subreports
policy_name	String	Specifies the user-assigned name for the replication policy.	subreports
regular_files_replicated	Integer	Specifies the number of regular files that were replicated by the replication job.	subreports

Property	Type	Description	Property of
retransmitted_files	String	Specifies the number of files that were retransmitted by the replication job. Files are retransmitted if they fail a hash check or are missing from the target cluster for any reason.	subreports
retry	Integer	Specifies the number of times the replication job was retried.	subreports
sockets_replicated	Integer	Specifies the number of sockets that are being replicated by the replication job.	subreports
source_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the source cluster.	subreports
source_directories_created	Integer	Specifies the number of directories that were created on the source cluster.	subreports
source_directories_deleted	Integer	Specifies the number of directories that were deleted on the source cluster.	subreports
source_directories_linked	Integer	Specifies the number of directories that are linked on the source cluster.	subreports
source_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the source cluster.	subreports
source_directories_visited	Integer	Specifies the number of source directories that were processed in the initial replication job.	subreports
source_files_deleted	Integer	Specifies the number of files that were deleted on the source cluster.	subreports
source_files_linked	Integer	Specifies the number of files that are linked on the source cluster.	subreports
source_files_unlinked	Integer	Specifies the number of files that are unlinked on the source cluster.	subreports
sparse_data_bytes	Integer	Specifies the number of sparse data bytes that were transferred by this replication job.	subreports
start_time	Integer	Specifies the time the replication job started in Unix EPOCH seconds. This field is null if the replication job has not started.	subreports
state	String	Specifies the state of the replication job. Options include: `scheduled`, `running`, `paused`, `finished`,	subreports

Property	Type	Description	Property of
		`failed`, `canceled`, `needs_attention`, and `unknown`.	
subreport_count	Integer	Specifies the number of subreports that are available for the replication job.	subreports
symlinks_replicated	Integer	Specifies the number of symlinks that are replicated by the replication job.	subreports
sync_type	Integer	Specifies the type of action performed by the job. Options include: `invalid`, `legacy`, `initial`, `incremental`, `upgrade`, `fofb`, and `domainmark`.	subreports
target_bytes_recovered	Integer	Specifies the number of bytes that were recovered on the target cluster.	subreports
target_directories_created	Integer	Specifies the number of directories that were created on the target cluster.	subreports
target_directories_deleted	Integer	Specifies the number of directories that were deleted on the target cluster.	subreports
target_directories_linked	Integer	Specifies the number of directories that are linked on the target cluster.	subreports
target_directories_unlinked	Integer	Specifies the number of directories that are unlinked on the target cluster.	subreports
target_files_deleted	Integer	Specifies the number of files that were deleted on the target cluster.	subreports
target_files_linked	Integer	Specifies the number of files that are linked on the target cluster.	subreports
target_files_unlinked	Integer	Specifies the number of files that are unlinked on the target cluster.	subreports
target_path	String	Specifies the absolute file system path on the target cluster for the replication job.	subreports
target_snapshots	Array	Specifies list of the target snapshots created by this replication job.	subreports
total_chunks	Integer	Specifies the total number of data chunks that were transmitted by this replication job.	subreports
total_data_bytes	Integer	Specifies the total number of bytes transferred by the replication job.	subreports

Property	Type	Description	Property of
total_files	Integer	Specifies the number of files that were changed by the replication job.	subreports
total_network_bytes	Integer	Specifies the total number of bytes that were sent over the network by the replication job.	subreports
total_phases	Integer	Specifies the total number of phases for the replication job.	subreports
unchanged_data_bytes	Integer	Specifies the number of bytes that were unchanged by the replication job.	subreports
up_to_date_files_skipped	Integer	Specifies the number of up-to-date files that are skipped by the replication job. These files were on the source cluster during a file system scan, but were not transferred because the file had not changed.	subreports
updated_files_replicated	Integer	Specifies the number of updates files that are replicated by the replication job.	subreports
user_conflict_files_skipped	Integer	Specifies the number of files with user conflicts that are skipped by the replication job.	subreports
warnings	Array	Specifies a list of warning messages for the replication job.	subreports

Sync rules resource

Applies the standard collection pattern to SyncIQ replication job performance rules. Rules can restrict the amount of network bandwidth or files transferred per second for replication policies.

Operation	Method and URI
Get all replication job performance rules.	GET /platform/1/sync/rules
Create a replication job performance rule.	POST /platform/1/sync/rules
Delete all replication job performance rules.	DELETE /platform/1/sync/rules/
Delete all replication job performance rules by type.	DELETE /platform/1/sync/rules?type=‹string›
Delete a replication job performance rule.	DELETE /platform/1/sync/rules/‹rule›
View the detailed JSON schema for this resource.	GET /platform/1/sync/rules?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

type=[bandwidth|file_count|cpu]

Specifies the type of rule to delete.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of rules available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
description	String	Specifies a user-assigned description to the performance rule.	rules
enabled	Boolean	Determines whether the performance rule is in effect during the specified intervals.	rules
id	String	Specifies the system-assigned ID for the performance rule. In a POST request, this value is the ID that refers to the item in the collection item resource path.	rules
schedule	Array	Specifies a list of time intervals that a performance rule is in effect within a given week. Options include `begin`, `end`, or the day of the week, such as `monday`, `tuesday`, `wednesday`, `thursday`, `friday`, `saturday`, or `sunday`.	rules
begin	String	Specifies the start time for the schedule. The start time is inclusive, and the format is \"hh:mm\" where hh: is the hour in 24-hour format and the minutes. A null value indicates the beginning of the day (\"00:00\").	schedule

Property	Type	Description	Property of
end	String	Specifies the end time for the schedule. The end time is inclusive, and the format is \"hh:mm\" with a three-letter weekday name abbreviation, where hh: is the hour in 24-hour format and the minutes. A null value indicates the end of the day (\"23:59\").	schedule
limit	Integer	Specifies the amount of system resources that are limited by the rule. Units include: kb/s for bandwidth, file/s for file-count, or a percentage that indicates the processing percentage used for the CPU.	rules

Sync settings resource

Applies the standard system object pattern to global SyncIQ settings.

Operation	Method and URI
Get global SyncIQ settings	GET /platform/1/sync/settings
Modify global SyncIQ settings	PUT /platform/1/sync/settings
View the detailed JSON schema for this resource.	GET /platform/1/sync/settings?describe

Query parameters

There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
force_interface	Boolean	Determines whether data is sent over a specified source interface and a source subnet, which is useful if there are multiple interfaces for a single source subnet. When enabling this property, you must also set a default source interface. This property is enabled for all new replication policies unless otherwise specified when the replication policy is created.	N/A
report_email	String	Specifies email addresses to send replication job reports to.	N/A
report_max_age	Integer	Specifies the default amount of seconds to retain a replication job report before the replication job report is deleted.	N/A

Property	Type	Description	Property of
report_max_count	Integer	Specifies the maximum number of replication job reports to retain for a replication policy.	N/A
restrict_target_network	Boolean	Determines if replication policies connect only to nodes in the specified zone if the target cluster is set as a SmartConnect zone. This property is enabled for all new replication policies unless otherwise specified when the replication policy is created. If this property is disabled, replication policies can connect to any node on the target cluster.	N/A
source_network	Object	Restricts replication policies on the local cluster to the specified subnet and pool.	N/A
service	Array	Specifies if the replication job service is `on`, `paused`, or `off`. If set to `paused`, all replication jobs are paused. If set to `off`, all replication jobs are canceled.	N/A

Sync history file resource

Applies the standard collection pattern to OneFS replication job performance reports. These reports indicate the number of files per second that were sent by replication policies at a given time.

Operation	Method and URI
Get all replication job performance reports.	GET /platform/1/sync/history/file
View the detailed JSON schema for this resource.	GET /platform/1/sync/history/file?describe

Query parameters

begin=‹integer›

The beginning timestamp for the report.

end=‹integer›

The ending timestamp for the report.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of reports available.	N/A
allocated	Integer	Specifies a list of nodes that are allocated for the replication job.	statistics

Property	Type	Description	Property of
id	Integer	Specifies an ID for a single performance report.	statistics
limit	Integer	Specifies the number of files per second that can be sent by a replication policy.	statistics
timestamp	Integer	Specifies a timestamp for the performance report.	statistics
total	Integer	Specifies the total number of files per second that were sent during the replication job.	statistics

Sync history network resource

Applies the standard collection pattern to OneFS replication job performance reports. These reports indicate the amount of network bandwidth consumed by data replication policies at a given time.

Operation	Method and URI
Get all replication job performance reports.	GET /platform/1/sync/history/network
View the detailed JSON schema for this resource.	GET /platform/1/sync/history/network?describe

Query parameters

begin=‹integer›

The beginning timestamp for the report.

end=‹integer›

The ending timestamp for the report.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of reports available.	N/A
allocated	Integer	Specifies a list of nodes that are allocated for the replication job.	statistics
id	Integer	Specifies an ID for a single performance report.	statistics
limit	Integer	Specifies the kilobytes per second that can be consumed by a replication job on the network.	statistics
timestamp	Integer	Specifies a timestamp for the performance report.	statistics

Property	Type	Description	Property of
total	Integer	Specifies the total kilobytes per seconds consumed by the replication jobs.	statistics

SyncIQ API examples

You can see examples for some SyncIQ API calls.

Start a replication job

Manually start a replication job on the system.

Request example

```
POST /platform/1/sync/jobs
Authorization Basic cm9vdDph

    {
        'id': 'testpol'
    }
```

Response example

```
201 Created
Content-type: application/json,
Allow: 'GET, POST, HEAD'

    {
        "id":"testpol"
    }
```

Modify a replication job

Pause, cancel, or restart a job.

Request example

You can only modify the `state` object property for a replication job. Options are `pause`, `cancel`, and `restart`.

```
PUT /platform/1/sync/jobs/testpol
Authorization Basic cm9vdDph

    {
        'state': cancel,
    }
```

Response example

```
204 No Content
Content-type: text/plain,
Allow: 'GET, PUT'
```

Create a replication policy

You can create a replication policy on the file system.

Request example

```
POST    /platform/1/sync/policies
    Authorization Basic cm9vdDph
```

```
{
    'log_level': 'fatal',
    'name': 'myNewPolicy',
    'schedule': 'every 3 weeks',
    'source_root_path': '/ifs/data/sync2',
    'target_path': '/ifs/data/sync/target2',
    'action': 'copy',
    'report_max_count': 144,
    'source_exclude_directories': ['/ifs/data/sync2/exclude'],
    'source_include_directories': ['/ifs/data/sync2/include'],
    'target_host': 'localhost'
}
```

Response examples

In the following example, the request was successful and a replication policy ID is returned for the created object.

```
201 Created
Content-type: application/json,
Allow: 'DELETE, GET, POST, HEAD'

    {
        "id":"a33006f364842eefb629fc6b95c92559"
    }
```

In following example, the replication policy was not created and an error was returned.

```
    500 Internal Server Error
Content-type: application/json,
Allow: 'DELETE, GET, POST, HEAD'

    {
        "errors":[
            {
            "code":"AEC_EXCEPTION",
            "message":"duplicate policy <name,type> entry with id=
\'(null)\', name=\'myNewPolicy\'"
            }
        ]
    }
```

Modify a replication policy

You can modify a replication policy on the file system.

Request example

```
PUT    /platform/1/sync/policies/myNewPolicy
    Authorization Basic cm9vdDph

    {
        'target_compare_initial_sync': True,
        'enabled': True,
        'description': 'New policy',
        'target_host': 'newHostname'
    }
```

Response examples

The request was successful. No message body is returned for this request.

```
    204 No Content
    content-type: text/plain,
    allow: 'DELETE, GET, PUT, HEAD'
```

In the following example, the policy was not modified and an error message was returned.

```
500 Internal Server Error
Content-type: application/json,
Allow: 'DELETE, GET, PUT, HEAD'
```

```
{
    "errors":[
        {
        "code":"AEC_BAD_REQUEST",
        "field":"source_network",
        "message":"Flexnet subnet not found"
        }
    ]
}
```

Reset a replication policy

Reset a replication policy and force a full sync and copy replication job.

Request example

```
POST /platform/1/sync/policy/testPolicy/reset
```

Response example

```
201 Created
Content-type: application/json,
Allow: 'POST'

    {
        "id":"5275f97ebb3892ed4a47f71de20d4609"
    }
```

Force rotation for reports

Manually start rotation for the records in the database, which deletes reports that are older than the specified maximum retention period.

Request example

```
POST /platform/1/sync/reports-rotate
Authorization Basic cm9vdDph
```

Response example

```
201 Created
Content-type: application/json,
Allow: 'DELETE, GET, POST, HEAD'

    {
        "id":"a33006f364842eefb629fc6b95c92559"
    }
```

Cancel a target replication policy

You can cancel a replication policy from the target cluster.

Request example

```
POST /platform/1/sync/target/policies/testpol/cancel
Authorization Basic cm9vdDph
```

Response example

```
200 OK
Content-type: application/json,
Allow: 'DELETE, GET, PUT, HEAD'

    {
    "policies" :
    [

        {
        "failover_failback_state" : "writes_disabled",
```

```
            "id" : "021a24618064135c5df4c431fd132437",
            "last_job_state" : "paused",
            "last_source_coordinator_ip" : "127.0.0.1",
            "last_update_from_source" : 1371769450,
            "legacy_policy" : false,
            "name" : "testpol",
            "source_cluster_guid" :
     "005056300217c137c2512b163880cb4d843d",
            "source_host" : "jgregory",
            "target_path" : "/ifs/data/tgt"
            }
        ]
        }
```

Create a replication policy rule on the system.

You can create a replication policy rule on the file system.

Request example

```
POST /platform/1/sync/rules
Authorization Basic cm9vdDph

    {
        'type': 'file_count',
        'limit': 123,
        'schedule':
        {
            'begin': '09:00',
            'end': '17:00',
            'monday': True,
            'tuesday': True,
            'friday': True,
            'wednesday': True,
            'thursday': True,
            'sunday': False,
            'saturday': False
        }
    }
```

Response example

```
201 Created
Content-type: application/json,
Allow: 'DELETE, GET, POST, HEAD'

    {
        "id":"fc-0"
    }
```

Modify a replication policy rule.

You can modify replication policy rules on the system.

Request example

```
PUT /platform/sync/rules/
Authorization Basic cm9vdDph
```

Response example

```
204 No Content
Content-type: text/plain,
Allow: 'DELETE, GET, PUT, POST'
```

Modify SyncIQ settings

You can modify the SyncIQ settings on the system.

Request example

```
PUT /platform/1/sync/settings
Authorization Basic cm9vdDph

    {
        'report_max_count': 1234,
        'service': 'on'
    }
```

Response example

```
204 No Content
Content-type: text/plain,
Allow: 'DELETE, GET, PUT, HEAD'
```

CHAPTER 10

Deduplication resources

This section contains the following topics:

Deduplication overview

The SmartDedupe software module enables you to save storage space on your cluster by reducing redundant data. Deduplication maximizes the efficiency of your cluster by decreasing the amount of storage required to store multiple files with similar blocks.

SmartDedupe deduplicates data by scanning an Isilon cluster for identical data blocks. Each block is 8 KB. If SmartDedupe finds duplicate blocks, SmartDedupe moves a single copy of the blocks to a hidden file called a shadow store. SmartDedupe then deletes the duplicate blocks from the original files and replaces the blocks with pointers to the shadow store.

Deduplication is applied at the directory level, targeting all files and directories underneath one or more root directories. You can first assess a directory for deduplication and determine the estimated amount of space you can expect to save. You can then decide whether to deduplicate the directory. After you begin deduplicating a directory, you can monitor how much space is saved by deduplication in real time.

SmartDedupe does not deduplicate files that are 32 KB and smaller, because doing so would consume more cluster resources than the storage savings are worth. Each shadow store can contain up to 255 blocks. Each block in a shadow store can be referenced 32000 times.

Deduplication resources

You can retrieve, create, modify, or delete SmartDedupe configurations and settings.

Deduplication summary resource

Applies the standard summary pattern to OneFS SmartDedupe jobs.

Operation	Method and URI
Get a summary of deduplication jobs	GET /platform/1/dedupe/dedupe-summary
View the detailed JSON schema for this resource	GET /platform/1/dedupe/dedupe-summary?describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
block_size	Integer	Specifies the file system block size in bytes.	summary
estimated_physical_blocks	Integer	Specifies the estimated number of physical blocks that will be deduplicated.	summary
estimated_saved_blocks	Integer	Specifies the estimated number of physical blocks that are saved by deduplication.	summary

Property	Type	Description	Property of
logical_blocks	Integer	Specifies the number of logical blocks that are deduplicated.	summary
saved_logical_blocks	Integer	Specifies the number of logical blocks that are saved by deduplication.	summary
total_blocks	Integer	Specifies the total number of physical blocks in the cluster.	summary
used_blocks	Integer	Specifies the total number of physical blocks that are holding data in the cluster.	summary

Deduplication settings resource

Applies the standard system object pattern to OneFS deduplication settings.

Operation	Method and URI
Get deduplication settings	GET /platform/1/dedupe/settings
Modify deduplication settings	PUT /platform/1/dedupe/settings
View the detailed JSON schema for this resource	GET /platform/1/dedupe/settings?describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
assess_paths	Array	Specifies the path to directories that are assessed for deduplication.	settings
dedupe_schedule	String	Specifies a schedule for deduplication.	settings
paths	Array	Specifies the paths that are deduplicated.	settings

Deduplication reports resource

Applies the standard collection pattern to SmartDedupe reports.

Operation	Method and URI
Get a report for all deduplication jobs	GET /platform/1/dedupe/reports
View the detailed JSON schema for this resource	GET /platform/1/dedupe/reports?describe

Query parameters

sort=‹string›

Order results by this field. The default value is `id`.

begin=‹integer›

Return only those reports at or after the given time in seconds since UNIX Epoch.

end=‹integer›

Return only those reports at or before the given time in seconds since UNIX Epoch.

job_id=‹integer›

Return only those jobs with a specific identifier.

job_type=[Dedupe|DedupeAssessment]

Return only those jobs with the specified job type.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value of the resume argument for continuation calls.	reports
dedupe_percent	Boolean	Specifies the percentage of scanned blocks that were deduplicated.	reports
elapsed_time	Boolean	Specifies the amount of time taken to complete the job.	reports
id	String	Specifies a unique identifier for the report.	reports
job_id	String	Specifies a unique identifier for the deduplication job in the report.	reports
job_type	String	Specifies the type of deduplication job.	reports
reports	Array	Specifies a list of entries in the report for the deduplication job.	reports
phase	Integer	Reports the phase of the job. This value ranges from 1-4.	reports
results	String	Specifies the results for the report.	reports
time	Integer	Specifies the time that the report was generated in seconds since UNIX Epoch.	reports

Deduplication API examples

You can see examples for some deduplication API calls.

Modify deduplication settings

You can modify deduplication settings on the cluster.

Request example

```
GET /platform/1/dedupe/settings
Authorization Basic cm9vdDph

{
    'paths': [
        '/ifs/data/dedupeme1',
        '/ifs/data/dedupeme2'
    ]
}
```

Response example

```
204 No Content
Content-type: 'text/plain,
Allow: 'GET, PUT, HEAD'
```

CHAPTER 11

Smartpools resource

This section contains the following topics:

Storage pools overview

Storage pools allows you to organize cluster resources as logical groups (called node pools and tiers), and to create policies that store or move files among these groups automatically, based on criteria you specify.

Node pools are sets of like nodes that are grouped into a single pool of storage. Node pool membership changes automatically through the addition or removal of nodes to or from the cluster. Storage pools are node pools and user-defined tiers. File pools are logical sets of files that are defined by the user, such as all JPG files, all files under the directory `/ifs/data/ingest`, or all files created more than a month ago. Data storage in storage pools is defined by file pool policies. File pool policies identify logical groups of files, and the actions to perform on them. For example, one policy can store all files of a specific type and age in a specific node pool. Another can move all files in a specific path, that have been changed after a specific date, to a specific tier.

If a SmartPools license is not active, all files belong to the default file pool and are governed by the default file pool policy. Additional features are available when you activate the SmartPools license, such as the ability to create multiple file pools and file pool policies that store specified files and directories in a particular storage pool. Spillover management, another feature that is available when you activate a SmartPools license, lets you define how write operations are handled when a storage pool is not writable. Virtual hot spare allocation, which reserves space for data repair if a drive fails, is available regardless of whether a SmartPools license is active.

The following table compares storage pool features based on whether a SmartPools license is active.

Feature	Inactive	Active
Automatic storage pool provisioning	Yes	Yes
Directed spillover	No	Yes
Policy-based data movement	No	Yes
Virtual hot spare	Yes	Yes

Storage pools resources

You can retrieve, create, modify, or delete system storage pool settings and configurations.

Storage pool settings resource

Applies the standard settings pattern to OneFS storage pools.

Operation	Method and URI
Get storage pool settings	GET /platform/1/storagepool/settings
Modify storage pool settings	PUT /platform/1/storagepool/settings
View the detailed JSON schema for this resource	GET /platform/1/storagepool/settings?describe

Query parameters

There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
automatically_manage_io_optimization	String	Automatically manages the I/O optimization settings on files. Operations are optimized by storing single copies of each file's metadata on SSD and reducing the latency of metadata read operations. Options are: `all`, `files_at_default`, and `none`. When the option for `files_at_default` is specified, files that do not have a manually managed flag set will have their I/O optimization settings set by the SmartPools job.	settings
automatically_manage_protection	String	Automatically manages the protection settings on files. Options are: `all`, `files_at_default`, and `none`.	settings
global_namespace_acceleration_enabled	Boolean	Determines if metadata is stored on solid state drives. Enabling this option optimizes namespace operations.	settings
global_namespace_acceleration_state	String	Specifies whether namespace operation optimizations are currently in effect. Read-only values are: `honored` or `inactive`.	settings
protect_directories_one_level_higher	Boolean	Determines if an additional protection level is added automatically to all directories.	settings
spillover_enabled	Boolean	Determines if data is written into other pools when the specified storage target is not writeable.	settings
spillover_target	Object	Specifies a target pool for data when the specified storage target is not writeable.	settings
id	Integer	Specifies the target pool ID if a target is specified. Otherwise, this value can be set to null.	spillover_target
name	String	Specifies the target pool name if a target is specified. Otherwise, this value can be set to null.	spillover_target
type	String	Specifies the type of target pool. Options are `tier`, `nodepool`, `anywhere`, and `invalid`.	spillover_target

Property	Type	Description	Property of
virtual_hot_spare_deny_writes	Boolean	Determines if writes are denied in reserved virtual hot spare space.	settings
virtual_hot_spare_hide_spare	Boolean	Determines if reserved virtual hot spare space is hidden from free space counts.	settings
virtual_hot_spare_limit_drives	Integer	Specifies the number of drives to reserve for the virtual hot spare. This value can be 0-4.	settings
virtual_hot_spare_limit_percent	Integer	Specifies the percent space to reserve for the virtual hot spare. This value can be 0-20.	settings

Storage pools tiers resource

Applies the standard collection pattern to OneFS tiers.

Operation	Method and URI
Get a list of all tiers	GET /platform/1/storagepool/tiers
Get a single tier	GET /platform/1/storagepool/tiers/‹name or id›
Create a new tier	POST /platform/1/storagepool/tiers
Delete all tiers	DELETE /platform/1/storagepool/tiers
Delete a single tier	DELETE /platform/1/storagepool/tiers/‹name or id›
View the detailed JSON schema for this resource	GET /platform/1/storagepool/tiers?describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of tiers.	N/A
id	Integer	Specifies the system ID given to the tier.	tiers
lnns	Array	Specifies the nodes that are part of this tier.	tiers
name	String	Specifies the name of the tier.	tiers
usage	Object	Reports the total tier usage.	tiers
avail_bytes	Integer	Reports the number of available free bytes that are in the tier when a virtual hot spare is taken into account.	usage

Property	Type	Description	Property of
avail_ssd_bytes	Integer	Reports the number of available free bytes that are in the tier and on SSD drives when a virtual hot spare is taken into account.	usage
balanced	Boolean	Reports if the pool usage is currently balanced.	usage
free_bytes	Integer	Reports the number of free bytes that are in the pool.	usage
free_ssd_bytes	Integer	Reports the number of free bytes that are in the pool and on SSD drives.	usage
total_bytes	Integer	Reports the number of total bytes of data in the pool.	usage
total_ssd_bytes	Integer	Reports the number of total bytes of data in the pool and on SSD drives.	usage
virtual_hot_spare_bytes	Integer	Reports the number of bytes reserved for a virtual hot spare in the pool.	usage

Storage pools node pools resource

Applies the standard collection pattern to OneFS node pools.

Operation	Method and URI
Get information for all node pools	GET /platform/1/storagepool/nodepools
Get information for a single node pool	GET /platform/1/storagepool/nodepools/‹name or id›
Create a new node pool	POST /platform/1/storagepool/nodepools
Modify a node pool	PUT /platform/1/storagepool/nodepools/‹name or id›
Delete a manually managed node pool	DELETE /platform/1/storagepool/nodepools/‹name or id›
View the detailed JSON schema for this resource	GET /platform/1/storagepool/nodepools?describe

Query parameters

There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of node pools.	N/A
id	Integer	Specifies the system ID given to the node pool.	nodepools

Property	Type	Description	Property of
lnns	Array	Specifies the nodes that are part of this node pool, by Logical Node Number (LNN).	nodepools
manual	Boolean	Determines if the node pool is managed manually by the user or automatically by the system.	nodepools
name	String	Specifies the name of the node pool.	nodepools
protection_policy	String	Specifies the underlying protection policy.	nodepools
tier	String	Specifies the name or system ID of the tier that the node pool is in. If the node pool is not in a tier, this value is null.	nodepools
usage	Object	Reports the total pool usage.	nodepools
avail_bytes	Integer	Reports the number of available free bytes that are in the pool when a virtual hot spare is taken into account.	usage
avail_ssd_bytes	Integer	Reports the number of available free bytes that are in the pool and on SSD drives when a virtual hot spare is taken into account.	usage
balanced	Boolean	Reports if the pool usage is currently balanced.	usage
free_bytes	Integer	Reports the number of free bytes that are in the pool.	usage
free_ssd_bytes	Integer	Reports the number of free bytes that are in the pool and on SSD drives.	usage
total_bytes	Integer	Reports the number of total bytes of data in the pool.	usage
total_ssd_bytes	Integer	Reports the number of total bytes of data in the pool and on SSD drives.	usage
virtual_hot_spare_bytes	Integer	Reports the number of bytes reserved for a virtual hot spare in the pool.	usage

Storage pools resource

Applies the standard collection pattern to OneFS storage pools. You can supply a toplevels argument to filter out node pools within tiers.

Operation	Method and URI
Get information for all storage pools	GET /platform/1/storagepool/storagepools
View the detailed JSON schema for this resource	GET /platform/1/storagepool/storagepools? describe

Query parameters
There are no query parameters for this resource.

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of storage pools.	N/A
id	Integer	Specifies the system ID given to the storage pool.	storagepools
lnns	Array	Specifies the nodes that are part of this storage pool, by Logical Node Number (LNN).	storagepools
manual	Boolean	Determines if the node pool is managed manually by the user or automatically by the system.	storagepools
name	String	Specifies the name of the storage pool.	storagepools
protection_policy	String	Specifies the underlying protection policy.	storagepools
type	String	Specifies the pool type. Options are tier or nodepool.	storagepools
tier	String	Specifies the name or system ID of the tier that the node pool is in. If the node pool is not in a tier, this value is null.	storagepools
usage	Object	Reports the total pool usage.	storagepools
avail_bytes	Integer	Reports the number of available free bytes that are in the pool when a virtual hot spare is taken into account.	usage
avail_ssd_bytes	Integer	Reports the number of available free bytes that are in the pool and on SSD drives when a virtual hot spare is taken into account.	usage

Property	Type	Description	Property of
balanced	Boolean	Reports if the pool usage is currently balanced.	usage
free_bytes	Integer	Reports the number of free bytes that are in the pool.	usage
free_ssd_bytes	Integer	Reports the number of free bytes that are in the pool and on SSD drives.	usage
total_bytes	Integer	Reports the number of total bytes of data in the pool.	usage
total_ssd_bytes	Integer	Reports the number of total bytes of data in the pool and on SSD drives.	usage
virtual_hot_spare_bytes	Integer	Reports the number of bytes reserved for a virtual hot spare in the pool.	usage

Storage pool status resource

Retrieves the heath status of the overall OneFS pool system.

Operation	Method and URI
Get the status of the OneFS pool system	GET /platform/1/storagepool/status
View the detailed JSON schema for this resource	GET /platform/1/storagepool/status?describe

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
affected	Object	Identifies unhealthy nodes and drives.	unhealthy
device	Object	Specifies the logical node number or drive identifier.	affected
bay	Integer	Specifies the drive bay number.	device
lnn	Integer	Specifies the node the drive is on.	device
down	Boolean	Determines if the device is currently down.	affected
restriping	Boolean	Determines if the device is currently being repaired.	affected
smartfailed	Boolean	Determines if the device is currently smartfailed.	affected
type	String	Specifies the type of device that is affected.	affected
drives	Array	Identifies the drives that are part of the disk pool.	diskpool
bay	Integer	Specifies the drive bay number.	drives
lnn	Integer	Specifies the node the drive is on, by Logical Node Number (LNN).	drives
id	Integer	Specifies the system ID given to the disk pool.	diskpool
name	String	Specifies the disk pool name.	diskpool

Property	Type	Description	Property of
nodepool_id	Integer	Specifies the system ID of the node pool for the disk pool. If the disk pool is not in a node pool, this value is null.	diskpool
protection_policy	String	Specifies the protection policy for the disk pool.	diskpool
ssd_drives	Array	Specifies the SSDs that are part of the disk pool.	diskpool
bay	Integer	Specifies the drive bay number.	ssd_drives
lnn	Integer	Specifies the node the drive is on.	ssd_drives
health_flags	Array	Specifies the health status for the disk pool. Options include: `underprovisioned`, `missing_drives`, `devices_down`, `devices_smartfailed`, and `waiting_repair`.	diskpool
unprovisioned	Array	Identifies drives that are currently not provisioned into a disk pool.	unhealthy
bay	Integer	Specifies the drive bay number.	drives
lnn	Integer	Specifies the node the drive is on.	drives

Storage pools API examples

You can see examples for some storage pools API calls.

Modify storage pool settings

You can modify the global storage pool settings on the system.

Request example
You must specify at least one property in the request.

```
PUT /platform/1/storagepool/settings
Authorization Basic cm9vdDph

    {
        'global_namespace_acceleration_enabled': false,
        'automatically_manage_protection': 'all'
    }
```

Response example
No message body is returned for this request.

```
204 NO CONTENT
Content-type: text/plain,
Allow: 'GET, PUT, HEAD'
```

Create a tier

Create a tier on the system.

Request example
```
POST /platform/1/storagepool/tiers
Authorization Basic cm9vdDph

    {
```

```
                                    'name': 'myTier'
                            }
```

Response example

```
201 CREATED
Content-type: application/json,
Allow: 'GET, POST, HEAD, DELETE'

        {
            "id":"myTier"
        }
```

Modify a tier

Modify a tier.

Request example

When you modify a set of nodes that belong to a tier, you must also set the `tier` property on that node pool through the /platform/1/storagepool/nodepools URI.

```
PUT /platform/1/storagepool/tiers/myTier
Authorization Basic cm9vdDph

        {
            "name": myTier
        }
PUT /platform/1/storagepool/nodepools
Authorization Basic cm9vdDph

        {
            "tier": myTier
        }
```

Response example

No message body is returned for this request.

```
204 NO CONTENT
Content-type: application/json,
Allow: 'GET, POST, PUT, DELETE'
```

Create a node pool

Create and manually manage a node pool.

Request example

You must specify a minimum of three lnns. After these nodes are added to the newly created node pool and removed from their current node pool, the number of nodes in the original node pool must either be 0 or greater than 2.

```
POST /platform/1/storagepool/nodepools
Authorization Basic cm9vdDph

        {
            'name': 'myPool',
            'lnns': [2, 3, 1]
        }
```

Response example

```
201 CREATED
Content-type: application/json,
Allow: 'GET, POST, HEAD, DELETE'

        {
            "id":"myPool"
        }
```

Modify a node pool

You can modify a node pool on the system.

Request example

You must specify at least one property in the body. Additionally, you can only specify lnns for manually managed node pools and you must specify a minimum of three lnns when modifying a manually managed node pool. If nodes are moved to a new node pool and removed from their current node pool, the number of nodes in the original node pool must either be 0 or greater than 2.

```
PUT /platform/1/storagepool/nodepools/myPool
Authorization Basic cm9vdDph

    {
        'tier': 'myTier',
        'name': 'myNewPoolName'
    }
```

Response example

No message body is returned for this request.

```
204 No Content
Content-type: application/json,
Allow: 'GET, POST, PUT, DELETE'
```

CHAPTER 12

Quotas resources

This section contains the following topics:

SmartQuotas overview

The SmartQuotas module is an optional quota-management tool that monitors and enforces administrator-defined storage limits. Using accounting and enforcement quota limits, reporting capabilities, and automated notifications, SmartQuotas manages storage use, monitors disk storage, and issues alerts when disk-storage limits are exceeded.

Quotas help you manage storage usage according to criteria that you define. Quotas are used as a method of tracking—and sometimes limiting—the amount of storage that a user, group, or project consumes. Quotas are a useful way of ensuring that a user or department does not infringe on the storage that is allocated to other users or departments. In some quota implementations, writes beyond the defined space are denied, and in other cases, a simple notification is sent.

The SmartQuotas module requires a separate license. For additional information about the SmartQuotas module or to activate the module, contact your EMC Isilon sales representative.

Quotas resources

You can retrieve, create, modify, or delete SmartQuotas configurations and settings.

Quota license resource

Retrieves license information for the SmartQuotas feature.

Operation	Method and URI
Get license information for SmartQuotas	`GET /platform/1/quota/license`
View the detailed JSON schema for this resource	`GET /platform/1/quota/license? describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
duration	Integer	Specifies the total duration in seconds for temporary licenses.	N/A
expiration	Integer	Specifies the UNIX Epoch time when the license expires.	N/A
status	Array	Specifies the current status of the license. Possible states are: `activated`, `evaluation`, `expired`, `inactive`, and `unknown`.	N/A

Property	Type	Description	Property of
name	String	Specifies the name of the licensed feature.	N/A

Quota summary resource

Applies the standard collection summary pattern to OneFS quotas.

Operation	Method and URI
Get summary information about quotas	`GET /platform/1/quota/quotas-summary`
View detailed JSON schema for this resource	`GET /platform/1/quota/quotas-summary?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
count	Integer	Specifies the total number of quotas.	summary
default_group_quotas_count	Integer	Specifies the total number of default-group quotas.	summary
default_user_quotas_count	Integer	Specifies the total number of default-user quotas.	summary
directory_quotas_count	Integer	Specifies the total number of directory quotas.	summary
group_quotas_count	Integer	Specifies the total number of group quotas.	summary
linked_quotas_count	Integer	Specifies the total number of user and group totals that are linked.	summary
user_quotas_count	Integer	Specifies the total number of user quotas.	summary

Quota quotas notification rules resource

Applies the standard collection pattern to the notification rules for a quota.

Operation	Method and URI
Get all notification rules for a quota	`GET /platform/1/quota/quotas/<quota-id>/notifications`
Get a notification rule for a quota	`GET /platform/1/quota/quotas/<quota-id>/notifications/<notification-id>`

Operation	Method and URI
Create notification rules for a quota	`POST /platform/1/quota/quotas/<quota-id>/ notifications`
Create empty override notification rules for a quota	`PUT /platform/1/quota/quotas/<quota-id>/ notifications`
Modify notification rules for a quota	`PUT /platform/1/quota/quotas/<quota-id>/ notifications/<notification-id>`
Delete all notification rules for a quota	`DELETE /platform/1/quota/quotas/<quota-id>/ notifications`
Delete notification rules for a quota	`DELETE /platform/1/quota/quotas/<quota-id>/ notifications/<notification-id>`
View detailed JSON schema for quota notification rules	`GET /platform/1/quota/quotas/<quota-id>/ notifications?describe`
View detailed JSON schema for a single quota notification rule object	`GET /platform/1/quota/quotas/<quota-id>/ notifications/<notification-id>?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Specifies the system ID given to the rule. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	notifications
action_alert	String	Sends an alert when the rule matches.	notifications
action_email_address	String	Sends an email to a specific address when the rule matches.	notifications
action_email_owner	String	Sends an email to the quota domain owner when the rule matches.	notifications
email_template	String	Specifies the path of the optional /ifs template file used for email.	notifications
condition	Array	Specifies the condition that must occur on the quota to trigger notification actions. Options include: exceeded, denied, violated, expired.	notifications

Property	Type	Description	Property of
holdoff	Integer	Specifies the time to wait between detections for rules that are triggered by user actions.	notifications

Quotas resource

Applies the standard collection pattern to file system quotas.

Operation	Method and URI
Get all quotas	`GET /platform/1/quota/quotas`
Get one quota	`GET /platform/1/quota/quotas/<quota-id>`
Create a quota	`POST /platform/1/quota/quotas`
Modify a quota	`PUT /platform/1/quota/quotas/<quota-id>`
Delete all quotas	`DELETE /platform/1/quota/quotas`
Delete a quota	`DELETE /platform/1/quota/quotas/<quota-id>`
View the detailed JSON schema for all quotas	`GET /platform/1/quota/quotas?describe`
View the detailed JSON schema for a single quota	`GET /platform/1/quota/quotas/<quota-id>?describe`

Query Parameters

path=‹string›

Only applies to quotas matching this path (see `recurse_path_*`).

type=[directory|user|group|default-user|default-group]

Only applies to quotas matching this type.

persona=‹string›

Only applies to user or group quotas that match this persona. This parameter must be used with the corresponding type argument).

include_snapshots=‹Boolean›

Only applies to quotas with the setting for `include_snapshots`.

enforced=‹Boolean›

Only applies to quotas with this enforcement (non-accounting).

exceeded=‹Boolean›

Only list quotas which have exceeded one or more of their thresholds.

recurse_path_parents=‹Boolean›

If used with the path argument, this parameter applies to all quotas at that path or at any parent directory.

recurse_path_children=‹Boolean›

If used with the path argument, this parameter applies to all quotas at that path or at any descendent subdirectory.

report_id=‹string›

Uses the named report as a source rather than the live quotas. See the quota reports resource for a list of valid reports.

zone=‹string›

An optionally named zone for user and group resolution.

resolve_names=‹Boolean›

If true, resolves group and user names in personas.

resume=‹string›

Continue returning results from a previous request (cannot be used with other parameters).

Object Properties and Structure

Property	Type	Description	Property of
total	Integer	Specifies the total number of quotas available.	N/A
resume	Integer	Specifies the value for the resume argument to be used for continuation requests.	N/A
container	Boolean	Enables the SMB shares using the quota directory to see the quota threshold as the share size.	N/A
id	String	Specifies the system ID given to the quota. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	quotas
enforced	Boolean	True if the quota provides enforcement, otherwise an accounting quota.	quotas
force	String	Forces the creation of quotas on the root of /ifs.	quotas
include_snapshots	Boolean	True if the quota governs snapshot data as well as head data.	quotas
linked	Boolean	True if the quota for a user or group is linked and controlled by a parent default-* quota. Linked quotas cannot be modified until they are unlinked.	quotas
notifications	Array	Specifies a summary of notifications: custom indicates that one or more notification rules are available from the notifications sub-resource; default indicates that the system default rules are used; disabled indicates that no notifications are used for this quota.	quotas

Property	Type	Description	Property of
path	String	The /ifs path governed.	quotas
ready	Boolean	True if the accounting is accurate on the quota. If false, this quota is waiting on the completion of a QuotaScan job.	quotas
thresholds_include_overhead	Boolean	True if thresholds apply to the data plus file system overhead that is required to store the data (such as physical usage).	quotas
type	Array	Specifies the type of quota.	quotas
id	Integer	Specifies the serialized form of the persona (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	persona
name	String	Specifies the persona name, which must be combined with a type.	persona
type	String	Specifies the type of persona, which must be combined with a name.	persona
inodes	Integer	Specifies the number of inodes (file system entities) used by governed data.	usage
logical	Integer	Specifies the apparent bytes used by governed data.	usage
physical	Integer	Specifies the bytes used for governed data and file system overhead.	usage
advisory	Integer	Specifies the usage bytes at which notifications are sent but writes are not denied.	threshold
advisory_exceeded	Boolean	True if the advisory threshold was hit.	threshold
hard	Integer	Specifies the usage bytes at which further writes are denied.	threshold
hard_exceeded	Boolean	True if the hard threshold was hit.	threshold
soft	Integer	Specifies the usage bytes at which notifications are sent and soft grace time is started.	threshold
soft_exceeded	Boolean	True if the soft threshold was hit.	threshold
soft_grace	Integer	Specifies the time in seconds after which the soft threshold is hit and before writes are denied	threshold

Quota reports resource

Applies the standard collection pattern to quota reports.

Operation	Method and URI
Get all quota reports	`GET /platform/quota/reports`
Get a quota report	`GET /platform/quota/reports/<report-id>?contents`
Create a quota report	`POST /platform/quota/reports/<report-id>?contents`
Delete a quota report	`DELETE /platform/quota/reports/<report-id>`
View detailed JSON schema about quota reports.	`GET /platform/quota/reports?describe`
View detailed JSON schema about a single quota reports object.	`GET /platform/quota/reports/<report-id>?describe`

Query parameters

type=[summary|detail|all]

Only applies to reports matching this type.

generated=[manual|scheduled|all]

Applies to reports that match the source type (`scheduled`, `manual`, or `all`).

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of reports available.	N/A
resume	String	Specifies the value of the resume argument to be used for continuation calls.	N/A
id	String	Specifies the system ID given to the report. In a POST request, this value is the ID that refers to the created item in the collection item resource path.	reports

Property	Type	Description	Property of
generated	String	Indicates whether the report was generated manually (live) or scheduled.	reports
type	String	Indicates whether the report is a summary report or detail report.	reports
time	Integer	Specifies the UNIX Epoch time that the report was generated.	reports

Quota about reports resource

Applies the standard system object pattern to return metadata for individual quota reports.

Operation	Method and URI
Get metadata about a report	`GET /platform/1/quota/reports/<report-id>/about`
View detailed JSON schema for this resource	`GET /platform/1/quota/reports/<report-id>/about?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Provides the system ID given to the report. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	reports
generated	String	Indicates whether the report was generated manually (live) or by a schedule.	reports
type	String	Indicates whether the report is a summary report or detail report.	reports
time	Integer	Provides the UNIX Epoch time the report was taken.	reports

Quota report settings resource

Applies the standard system object pattern to quota report settings.

Operation	Method and URI
Get quota report settings	`GET /platform/1/quota/settings/reports`

Operation	Method and URI
Modify quota report settings	`PUT /platform/1/quota/settings/reports`
View the detailed JSON schema for this resource	`GET /platform/1/quota/settings/reports?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Specifies the system ID given to the rule. In a POST request, this is the ID of the created item that is used to refer to the item in the collection item resource path.	settings
live_dir	String	Specifies the directory on `/ifs` where manual or live reports are placed.	settings
live_retain	Integer	Specifies the number of manual reports to keep.	settings
schedule	String	Specifies the `isidate` schedule used to generate reports.	settings
scheduled_dir	String	Specifies the directory on `/ifs` where schedule reports are placed.	settings
scheduled_retain	Integer	Specifies the number of scheduled reports to keep.	settings
schedule	String	Specifies the schedule for repeated notification rules.	settings
threshold	Integer	Specifies the detected quota threshold.	settings

Quota default notifications rules resource

Applies the standard collection pattern to default quota notification rules.

Operation	Method and URI
Get default global notification rules	`GET /platform/1/quota/settings/notifications` or `GET /platform/1/quota/quotas/<quota-id>/notifications`
Get a default global notification rule	`GET /platform/1/quota/settings/notifications/<notification-id>`

Operation	Method and URI
	or `GET /platform/1/quota/quotas/<quota-id>/notifications`
Create a default global notification rule	`POST /platform/1/quota/settings/notifications/<notification-id>` or `POST /platform/1/quota/quotas/<quota-id>/notifications/<notification-id>`
Modify a default global notification rule	`PUT /platform/1/quota/settings/notifications/<notification-id>` or `PUT /platform/1/quota/quotas/<quota-id>/notifications/<notification-id>`
Delete default global notification rules	`DELETE /platform/1/quota/settings/notifications` or `DELETE /platform/1/quota/quotas/<quota-id>/notifications`
Delete a default global notification rule	`DELETE /platform/1/quota/settings/notifications/<notification-id>` or `DELETE /platform/1/quota/quotas/<quota-id>/notifications/<notification-id>`
View the detailed JSON schema about global notification rules	`GET /platform/1/quota/settings/notifications?describe`
View the detailed JSON schema about a global notification rule	`GET /platform/1/quota/settings/notifications/<notification-id>?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Specifies the system ID given to the rule. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	notifications
action_alert	String	Sends an alert when the rule matches.	notifications
action_email_address	String	Sends an email to a specific address when the rule matches.	notifications
action_email_owner	String	Sends an email to the quota domain owner when the rule matches.	notifications
email_template	String	Specifies the path of the optional `/ifs` template file used for email.	notifications

Property	Type	Description	Property of
condition	Array	Specifies the condition that must occur on the quota to trigger notification actions. Options consist of: `exceeded`, `denied`, `violated`, and `expired`.	notifications
holdoff	Integer	Specifies the time to wait between detections for rules triggered by user actions.	notifications
schedule	String	Specifies the schedule for repeated notification rules.	notifications
threshold	Integer	Specifies the detected quota threshold.	notifications

Quota mappings settings resource

Applies the standard collection pattern to quota notification email mapping rules.

Operation	Method and URI
Get quota email mapping settings	`GET /platform/1/quota/settings/mappings`
Create quota email mapping settings	`POST /platform/1/quota/settings/mappings/<domain>`
Modify quota email mapping setting	`PUT /platform/1/quota/settings/mappings/<domain>`
Delete all quota email mapping settings	`DELETE /platform/1/quota/settings/mappings`
Delete a quota email mapping setting	`DELETE /platform/1/quota/settings/mappings/<domain>`
View the detailed JSON schema for quota email mapping settings	`GET /platform/1/quota/settings/mappings?describe`
View the detailed JSON schema for a quota email mapping settings object	`GET /platform/1/quota/settings/mappings/<domain>?describe`

Query parameters

There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	Integer	Specifies the system ID given to the domain. In a POST request, this is the ID of the created item that refers to the item in the collection item resource path.	mappings

Property	Type	Description	Property of
domain	String	Specifies the fully qualified domain name of the source domain to map.	mappings
mapping	String	Specifies the fully qualified domain name of the destination domain to map to.	mappings
type	Array	Specifies the authentication provider type. Options include: ADS, local, NIS, LDAP, and file.	mappings

CHAPTER 13

Snapshot resources

This section contains the following topics:

Snapshots overview

A OneFS snapshot is a logical pointer to data that is stored on a cluster at a specific point in time.

A snapshot references a directory on a cluster, including all data stored in the directory and its subdirectories. If the data referenced by a snapshot is modified, the snapshot stores a physical copy of the data that was modified. Snapshots are created according to user specifications or are automatically generated by OneFS to facilitate system operations.

To create and manage snapshots, you must activate a SnapshotIQ license on the cluster. Some applications must generate snapshots to function but do not require you to activate a SnapshotIQ license; by default, these snapshots are automatically deleted when OneFS no longer needs them. However, if you activate a SnapshotIQ license, you can retain these snapshots. You can view snapshots generated by other modules without activating a SnapshotIQ license.

You can identify and locate snapshots by name or ID. A snapshot name is specified by a user and assigned to the virtual directory that contains the snapshot. A snapshot ID is a numerical identifier that OneFS automatically assigns to a snapshot.

Snapshots resources

You can retrieve, create, modify, or delete snapshot configurations and settings.

Snapshot license resource

This resource retrieves license information for SnapshotIQ.

Operation	Method and URI
Get license information for SnapshotIQ	`GET /platform/1/snapshot/license`
View the detailed JSON schema for this resource	`GET /platform/1/snapshot/license? describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
duration	Integer	Specifies the total duration in seconds for temporary licenses.	N/A
expiration	Integer	Specifies the UNIX Epoch time when the license expires.	N/A
status	Array	Specifies the current status of the license. Possible states are: `activated`, `evaluation`, `expired`, `inactive`, and `unknown`.	N/A

Property	Type	Description	Property of
name	String	Specifies the name of the licensed feature.	N/A

Snapshot summary resource

This resource retrieves summary information for file system snapshots.

Operation	Method and URI
Get a summary of file system snapshots	`GET /platform/1/snapshot/ snapshots-summary`
View the detailed JSON schema for this resource	`GET /platform/1/snapshot/ snapshots-summary?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
count	Integer	Specifies the total number of snapshots.	summary
active_count	Integer	Specifies the total number of snapshots that are not aliases or pending for deletion.	summary
deleting_count	Integer	Specifies the total number of snapshots that are pending for deletion.	summary
aliases_count	Integer	Specifies the total number of snapshot aliases.	summary
shadow_bytes	Integer	Specifies the number of bytes in a snapshot that are referenced in a shadow store.	summary
size	Integer	Specifies the sum of sizes in bytes of all snapshots.	summary
active_size	Integer	Specifies the sum of sizes of snapshots that are not aliases or pending for deletion.	summary
deleting_size	Integer	Specifies the sum of sizes of snapshots that are pending for deletion.	summary

Snapshots resource

Applies the standard collection pattern to file system snapshots.

Operation	Method and URI
Get a list of all snapshots	`GET /platform/1/snapshot/snapshots`
Get a single snapshot	`GET /platform/1/snapshot/snapshots/<id| snapshot name>`
Create a snapshot	`POST /platform/1/snapshot/snapshots`
Modify a snapshot	`PUT /platform/1/snapshot/snapshots/<id| snapshot name>`
Delete all snapshots	`DELETE /platform/1/snapshot/snapshots`
Delete a snapshot	`DELETE /platform/1/snapshot/snapshots/<id| snapshot name>`
View the detailed JSON schema for a single snapshot	`GET /platform/1/snapshot/snapshots/<id| snapshot name>?describe`
View the detailed JSON schema for snapshots	`GET /platform/1/snapshot/snapshots?describe`

Query parameters

sort=‹string›

Order results by this field. Options consist of `id`, `name`, `path`, `created`, `expires`, `size`, `has_locks`, `schedule`, `alias_target`, `alias_target_name`, `pct_filesystem`, `pct_reserve`, and `state`. The default value is `id`.

schedule=‹string›

Only list snapshots that were created by this schedule.

type=[all|active|deleting]

Only return snapshots that match this type.

state=[all|alias|real]

Only return snapshots that match this state.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of snapshots available.	N/A
resume	String	Specifies the value for the resume argument for continuation requests.	N/A
id	Integer	Specifies the system ID that is given to the snapshot. This ID is useful for tracking the status of delete pending snapshots, because after being marked for deletion, a snapshot can no longer be referenced by name. In a POST request, this value is the ID that refers to the item in the collection item resource path.	snapshots
name	String	Specifies the user or system supplied snapshot name. This value is null for snapshots that are pending delete.	snapshots
shadow_bytes	Integer	Specifies the number of bytes in a snapshot that is referenced in a shadow store.	snapshots
schedule	String	Specifies the name of the schedule used to create this snapshot, if applicable.	snapshots
created	Integer	Specifies the Unix Epoch time the snapshot was created.	snapshots
expires	Integer	Specifies the Unix Epoch time the snapshot expires and is eligible for automatic deletion.	snapshots
path	String	Specifies a snapshot of the `/ifs` path.	snapshots
size	Integer	Specifies the amount of storage (in bytes) used to store this snapshot.	snapshots
pct_filesystem	Integer	Specifies the percentage of the /ifs directory that is storing this snapshot.	snapshots
pct_reserve	Integer	Specifies the percentage of the configured snapshot that is reserved to store this snapshot.	snapshots
alias_target	Integer	Specifies the ID of the snapshot pointed to if this value is an alias.	snapshots
alias_target_name	String	Specifies the name of the snapshot pointed to if this value is an alias.	snapshots
has_locks	Boolean	True if the snapshot has one or more locks present. See the locks resource of a snapshot for a list of locks.	snapshots

Property	Type	Description	Property of
state	String	Provides the snapshot state. The options are `active` or `deleting`.	snapshots

Snapshot schedules resource

Applies the standard collection pattern to snapshot schedules.

Operation	Method and URI
Get a list of all snapshot schedules	`GET /platform/1/snapshot/schedules`
Get a single snapshot schedule	`GET /platform/1/snapshot/schedules/<id|schedule name>`
Create a snapshot schedule	`POST /platform/1/snapshot/schedules`
Modify a snapshot schedule	`PUT /platform/1/snapshot/schedules/<id|schedule name>`
Delete all snapshot schedules	`DELETE /platform/1/snapshot/schedules`
Delete a snapshot schedule	`DELETE /platform/1/snapshot/schedules/<id|schedule name>`
View the detailed JSON schema for a single snapshot schedule object	`GET /platform/1/snapshot/schedules/<id|schedule name>?describe`
View the detailed JSON schema for snapshot schedules	`GET /platform/1/snapshot/schedules?describe`

Query parameters

sort=‹string›

Order results by this field. Options consist of `id`, `name`, `path`, `pattern`, `schedule`, `duration`, `alias`, `next_run`, and `next_snapshot`. The default option is `id`.

dir=[ASC|DESC]

Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the total number of schedules to display.	N/A
resume	String	Specifies the value for the resume argument to be used for continuation requests.	N/A
id	Integer	Specifies the system ID given to the schedule. In a POST request, this value is the ID that refers to the item in the collection item resource path.	schedules
name	String	Specifies the name of the schedule.	schedules
pattern	String	Creates names for snapshot schedules according to a pattern with the `strftime` function.	schedules
path	String	Specifies the path to take a snapshot of.	schedules
schedule	String	Specifies the `isidate` compatible natural language description of the schedule.	schedules
duration	Integer	Specifies the amount of time before a snapshot is automatically deleted by a schedule.	schedules
alias	String	Specifies the alternative name to create for each snapshot.	schedules
next_run	Integer	Specifies the UNIX Epoch time of next snapshot to be created.	schedules
next_snapshot	String	Specifies the formatted name of the next snapshot to be created.	schedules

Snapshot locks resource

Applies the standard collection pattern to locks on an individual snapshot.

Operation	Method and URI
Get a list of locks on a snapshot	`GET /platform/1/snapshot/snapshots/<id| snapshot name>/locks`
Get a single lock on a snapshot	`GET /platform/1/snapshot/snapshots/<snapshot-name|id>/locks/<lock-id>`
Create a lock on a snapshot	`POST /platform/1/snapshot/snapshots/<snapshot-name|id>/locks`
Modify a lock on a snapshot	`PUT /platform/1/snapshot/snapshots/<snapshot-name|id>/locks/<lock-id>`

Operation	Method and URI
Remove a lock from a snapshot	`DELETE /platform/1/snapshot/snapshots/<lock-id>/locks`
View the detailed JSON schema for a single snapshot lock object	`GET /platform/1/snapshot/snapshots/<snapshot-name|id>/locks/<lock-id>?describe`
View the detailed JSON schema for snapshot locks	`GET /platform/1/snapshot/snapshots/<id|snapshot name>/locks?describe`

Query parameters

sort=‹string›

> Order results by this field; options consist of `id`, `expires`, and `comment`. The default option is `id`.

dir=[ASC|DESC]

> Directions for the sort order are ascending (`ASC`) or descending (`DESC`). The default setting is `ASC`.

limit=‹integer›

> Return no more than this many results at one time (see `resume`).

resume=‹string›

> Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
total	Integer	Specifies the number of items available.	N/A
resume	String	Specifies the value for the resume argument to be used for continuation calls.	N/A
id	Integer	Specifies the system generated lock ID. In a POST request, this value refers to the item in the collection item resource path.	locks
comment	String	Specifies the user-supplied lock comment.	locks
expires	Integer	Specifies the UNIX Epoch time the snapshot lock expires and is eligible for automatic deletion.	locks

Snapshot pending resource

Applies the standard collection pattern to snapshots that will be generated by a snapshot schedule.

Operation	Method and URI
Get a list of scheduled pending snapshots	`GET /platform/1/snapshot/pending`
View the detailed JSON schema for this resource	`GET /platform/1/snapshot/pending?describe`

Query parameters

schedule=‹string›

Limit output only to the named schedule.

begin=‹integer›

UNIX Epoch time to start generating matches. The default option is `now`.

end=‹integer›

UNIX Epoch time to end generating matches. The default option is `forever`.

limit=‹integer›

Return no more than this many results at one time (see `resume`).

resume=‹string›

Continue returning results from previous request (cannot be used with other parameters).

Object properties

Property	Type	Description	Property of
resume	String	Specifies the value for the resume argument to be used for continuation requests.	N/A
id	String	Specifies the system supplied unique ID used for sorting and paging.	pending
schedule	String	Specifies the name of the schedule that created this snapshot.	pending
time	Integer	Specifies the UNIX Epoch time the snapshot will be created.	pending
snapshot	String	Specifies the system snapshot name formed from the schedule formate.	pending
path	String	Specifies the `/ifs` path of the snapshot that is taken.	pending

Snapshot settings resource

Applies the standard settings pattern to global snapshot settings.

Operation	Method and URI
Get the current snapshot settings	`GET /platform/1/snapshot/settings`
Modify the current snapshot settings	`PUT /platform/1/snapshot/settings`
View the detailed JSON schema for this resource	`GET /platform/1/snapshot/settings?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
service	Boolean	True if the system allows snapshot creation.	settings
autocreate	Boolean	True if the scheduled snapshot creation services is enabled.	settings
autodelete	Boolean	True if the scheduled snapshot deletion services is enabled.	settings
reserve	Integer	Specifies the percentage of space to reserve for snapshots.	settings
global_visible_accessible	Boolean	Enables a global switch for accessibility and visibility settings of snapshot directories.	settings
nfs_root_accessible	Boolean	True if the root .snapshot directory is accessible over NFS.	settings
nfs_root_visible	Boolean	True if the root .snapshot directory is visible over NFS.	settings
nfs_subdir_accessible	Boolean	True if the subdirectory .snapshot directories are accessible over NFS.	settings
local_root_accessible	Boolean	True if the root .snapshot directory is accessible locally.	settings
local_root_visible	Boolean	True if the root .snapshot directory is visible locally.	settings
local_subdir_accessible	Boolean	True if the subdirectory .snapshot directories are accessible locally.	settings
smb_root_accessible	Boolean	True if the root .snapshot directory is accessible over SMB.	settings
smb_root_visible	Boolean	True if the root .snapshot directory is visible over SMB.	settings
smb_subdir_accessible	Boolean	True if the subdirectory .snapshot directories are accessible over SMB.	settings

CHAPTER 14

Access zone resources

This section contains the following topics:

Access zones overview

You can use access zones to partition cluster configuration into self-contained units. Access zones provide the means for administrators to configure a subset of parameters as a virtual cluster.

OneFS includes a built-in access zone named System that contains all configured authentication providers, all available SMB shares, and all available NFS exports. You can add additional access zones to the cluster as needed. By default, all cluster IP addresses connect to the System zone. The System zone is used by administrators for managing all access zone configuration tasks.

Access zones contain all of the necessary configuration settings to support authentication and identity management services in OneFS. NFS exports are added to the System zone, but you can configure authentication providers and SMB shares on a zone-by-zone basis. You also can use access zones to partition access to data through IP-address pools. When you configure access zones in this manner, incoming connections can be directed to an access zone by a specific IP address within a pool. his restricts authentication to that zone and reduces the available SMB shares that can be accessed.

Note

Role-based access, which primarily handles configuration actions, is available through only the System zone.

Access zone resources

You can retrieve, create, modify, or delete access zone configurations and settings.

Access zones resource

Applies the standard collection pattern to access zones.

Operation	Method and URI
Get all access zones	`GET /platform/1/zones`
Get one access zone	`GET /platform/1/zones/<zone-id>`
Create an access zone	`POST /platform/1/zones`
Modify an access zone	`PUT /platform/1/zones/<zone-id>`
Delete an access zone	`DELETE /platform/1/zones/<zone-id>`
View the detailed JSON schema for all access zones	`GET /platform/1/zones?describe`
View the detailed JSON schema for a single access zone	`GET /platform/1/zones/<zone-id>?describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
id	String	Provides the system ID for the access zone. In a POST request, this value is the ID that refers to the item in the collection item resource path.	zones
all_auth_providers	Boolean	Enables all authentication providers that are available.	zones
all_smb_shares	Boolean	Enables all SMB shares that are available.	zones
alternate_system_provider	String	Provides an alternate system provider.	zones
auth_providers	Array	Provides the list of authentication providers used on this access zone.	zones
cache_size	Integer	Specifies the maximum size of zone in-memory cache.	zones
home_directory_umask	Integer	Provides the permissions set on automatically created user home directories.	zones
ifs_restricted	Array	Returns an array of persona objects.	zones
id	Integer	The serialized form of the access zone (such as 'UID:0', 'USER:name', 'GID:0', 'GROUP:wheel', 'SID:S-1-1').	ifs_restricted
name	String	The persona name, which must be combined with type.	ifs_restricted
type	String	The type of persona, which must be combined with name.	ifs_restricted
local_provider	Boolean	Enables the local provider.	zones
map_untrusted	String	Maps untrusted domains to the NetBIOS domain during authentication.	zones
name	String	Provides the access zone name.	zones
netbios_name	String	Provides the NetBIOS name.	zones
skeleton_directory	String	Provides the skeleton directory that is used for user home directories.	zones
smb_shares	Array	Provides the list of SMB share names available within this access zone.	zones
system	Boolean	Indicates whether the access zone is built-in.	zones
system_provider	String	Provides the system provider for the access zone.	zones
user_mapping_rules	Array	Provides the current ID mapping rules.	zones

Property	Type	Description	Property of
zone_id	Integer	Provides the access zone ID on the system.	zones

Access zones summary resource

Retrieves summary information for access zones.

Operation	Method and URI
Get the access zones summary	`GET /platform/1/zones-summary`
View detailed JSON schema for this resource	`GET /platform/1/zones-summary?` `describe`

Query parameters
There are no parameters for this resource.

Object properties

Property	Type	Description	Property of
count	Integer	Specifies the total number of access zones.	summary

Access zone API examples

You can see examples for some access zone API calls.

Create an access zone

You can create an access zone.

Request example

```
POST /platform/1/zones
Authorization Basic cm9vdDph
```

```
{"name":"MyZone"}
```

Response example

```
201 Created
Content-type: application/json
```

```
{"id":"MyZone"}
```

Modify an access zone

You can modify the properties for an access zone.

Request example

In the following example, the `name` for ZoneA is changed to ZoneB.

```
PUT /platform/1/zones/ZoneA
Authorization Basic cm9vdDph

{"name":"ZoneB"}
```

Response example

```
204 No Content
Content-type: 'text/plain
```