



Manage FPolicy engine configuration

ONTAP 9.6 REST API reference

NetApp
April 02, 2024

Table of Contents

- Manage FPolicy engine configuration 1
 - Protocols fpolicy svm.uuid engines endpoint overview 1
 - Retrieve the FPolicy engine configuration for all engines of an SVM 6
 - Create the FPolicy engine configuration for an SVM 11
 - Delete an FPolicy external engine configuration 17
 - Retrieve a particular FPolicy engine configuration for an SVM 19
 - Update a specific FPolicy engine configuration for an SVM 22

Manage FPolicy engine configuration

Protocols fpolicy svm.uuid engines endpoint overview

Overview

The FPolicy engine allows you to configure the external servers to which the file access notifications are sent. As part of FPolicy engine configuration, you can configure the server(s) to which the notification is sent, an optional set of secondary server(s) to which the notification is sent in the case of the primary server(s) failure, the port number for FPolicy application and the type of the engine, synchronous or asynchronous.

For the synchronous engine, ONTAP will wait for a response from the FPolicy application before it allows the operation. With an asynchronous engine, ONTAP proceeds with the operation processing after sending the notification to the FPolicy application. An engine can belong to multiple FPolicy policies.

Examples

Creating an FPolicy engine

```
# The API:
POST /protocols/fpolicy/{svm.uuid}/engines

#The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/engines/" -H "accept: application/json" -H "Content-Type: application/json" -d '{"name": "engine0", "port": 9876, "primary_servers": [ "10.132.145.22", "10.140.101.109" ], "secondary_servers": [ "10.132.145.20", "10.132.145.21" ], "type": "synchronous"}'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "name": "engine0",
      "primary_servers": [
        "10.132.145.22",
        "10.140.101.109"
      ],
      "secondary_servers": [
        "10.132.145.20",
        "10.132.145.21"
      ],
      "port": 9876,
      "type": "synchronous"
    }
  ]
}
```

Creating an FPolicy engine with the minimum required fields

```
# The API:
POST /protocols/fpolicy/{svm.uuid}/engines

#The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/engines/" -H "accept: application/json" -H "Content-Type: application/json" -d '{"name": "engine0", "port": 9876, "primary_servers": [ "10.132.145.22", "10.140.101.109" ], "type": "synchronous"}'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "name": "engine0",
      "primary_servers": [
        "10.132.145.22",
        "10.140.101.109"
      ],
      "port": 9876,
      "type": "synchronous"
    }
  ]
}
```

Retrieving an FPolicy engine configuration for a particular SVM

```
# The API:
GET /protocols/fpolicy/{svm.uuid}/engines

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/engines/?fields=*&return_records=true&return_timeout=15"
-H "accept: application/json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
      },
      "name": "cifs",
      "primary_servers": [
        "10.20.20.10"
      ],
      "port": 9876,
      "type": "synchronous"
    },
    {
      "svm": {
        "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
      },
      "name": "nfs",
      "primary_servers": [
        "10.23.140.64",
        "10.140.101.109"
      ],
      "secondary_servers": [
        "10.132.145.20",
        "10.132.145.22"
      ],
      "port": 9876,
      "type": "synchronous"
    }
  ],
  "num_records": 2
}
```

Retrieving a specific FPolicy engine configuration for an SVM

```
# The Api:
GET /protocols/fpolicy/{svm.uuid}/engines/{name}

#The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/engines/cifs?fields=*" -H "accept: application/json"

# The response:
{
  "svm": {
    "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
  },
  "name": "cifs",
  "primary_servers": [
    "10.20.20.10"
  ],
  "port": 9876,
  "type": "synchronous"
}
```

Updating an FPolicy engine for an SVM

```
# The API:
PATCH /protocols/fpolicy/{svm.uuid}/engines/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/engines/cifs" -H "accept: application/json" -H "Content-Type: application/json" -d "{ \"port\": 6666, \"secondary_servers\": [ \"10.132.145.20\", \"10.132.145.21\" ], \"type\": \"synchronous\"}"
```

Updating all the attributes of a specific FPolicy engine for an SVM

```
# The API:
PATCH /protocols/fpolicy/{svm.uuid}/engines/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/engines/cifs" -H "accept: application/json" -H "Content-Type: application/json" -d '{"port": 9876, "primary_servers": ["10.132.145.20", "10.140.101.109"], "secondary_servers": ["10.132.145.23", "10.132.145.21"], "type": "synchronous"}'
```

Deleting a specific FPolicy engine for an SVM

```
# The API:
DELETE /protocols/fpolicy/{svm.uuid}/engines/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-ae49-0050568e2c1e/events/cifs" -H "accept: application/json"
```

Retrieve the FPolicy engine configuration for all engines of an SVM

```
GET /protocols/fpolicy/{svm.uuid}/engines
```

Retrieves FPolicy engine configurations of all the engines for a specified SVM. ONTAP allows creation of cluster-level FPolicy engines that act as a template for all the SVMs belonging to the cluster. These cluster-level FPolicy engines are also retrieved for the specified SVM.

Related ONTAP commands

- `fpolicy policy external-engine show`

Learn more

- [DOC /protocols/fpolicy/{svm.uuid}/engines](#)

Parameters

| Name | Type | In | Required | Description |
|-------------------|---------------|-------|----------|--|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| primary_servers | string | query | False | Filter by primary_servers |
| port | integer | query | False | Filter by port |
| type | string | query | False | Filter by type |
| secondary_servers | string | query | False | Filter by secondary_servers |
| name | string | query | False | Filter by name |
| fields | array[string] | query | False | Specify the fields to return. |
| max_records | integer | query | False | Limit the number of records returned. |
| return_records | boolean | query | False | The default is true for GET calls. When set to false, only the number of records is returned. |
| return_timeout | integer | query | False | The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. |
| order_by | array[string] | query | False | Order results by specified fields and optional [asc |

Response

Status: 200, Ok

| Name | Type | Description |
|--------------------------|--------------------------------------|-------------------|
| <code>_links</code> | <code>_links</code> | |
| <code>num_records</code> | integer | Number of records |
| <code>records</code> | array[<code>fpolicy_engine</code>] | |

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "name": "fp_ex_eng",
    "port": 9876,
    "primary_servers": [
      "10.132.145.20",
      "10.140.101.109"
    ],
    "secondary_servers": [
      "10.132.145.20",
      "10.132.145.21"
    ],
    "type": "synchronous"
  }
}
```

Error

Status: Default,

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| next | href | |
| self | href | |

fpolicy_engine

The engine defines how ONTAP makes and manages connections to external FPolicy servers.

| Name | Type | Description |
|-------------------|---------------|--|
| name | string | Specifies the name to assign to the external server configuration. |
| port | integer | Port number of the FPolicy server application. |
| primary_servers | array[string] | |
| secondary_servers | array[string] | |
| type | string | The notification mode determines what ONTAP does after sending notifications to FPolicy servers. The possible values are: <ul style="list-style-type: none">• synchronous - After sending a notification, wait for a response from the FPolicy server.• asynchronous - After sending a notification, file request processing continues.<ul style="list-style-type: none">◦ Default value: 1◦ enum: ["synchronous", "asynchronous"] |

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Create the FPolicy engine configuration for an SVM

POST /protocols/fpolicy/{svm.uuid}/engines

Creates an FPolicy engine configuration for a specified SVM. FPolicy engine creation is allowed only on data SVMs.

Required properties

- `svm.uuid` - Existing SVM in which to create the FPolicy engine.
- `name` - Name of external engine.
- `port` - Port number of the FPolicy server application.
- `primary_servers` - List of primary FPolicy servers to which the node will send notifications.

Recommended optional properties

- `secondary_servers` - It is recommended to configure secondary FPolicy server to which the node will send notifications when the primary server is down.

Default property values

- `type` - *synchronous*

Related ONTAP commands

- `fpolicy policy external-engine create`

Learn more

- [DOC /protocols/fpolicy/{svm.uuid}/engines](#)

Parameters

| Name | Type | In | Required | Description |
|----------|--------|------|----------|---|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

Request Body

| Name | Type | Description |
|-------------------|---------------|---|
| name | string | Specifies the name to assign to the external server configuration. |
| port | integer | Port number of the FPolicy server application. |
| primary_servers | array[string] | |
| secondary_servers | array[string] | |
| type | string | <p>The notification mode determines what ONTAP does after sending notifications to FPolicy servers. The possible values are:</p> <ul style="list-style-type: none">• synchronous - After sending a notification, wait for a response from the FPolicy server.• asynchronous - After sending a notification, file request processing continues.<ul style="list-style-type: none">◦ Default value: 1◦ enum: ["synchronous", "asynchronous"] |

Example request

```
{
  "name": "fp_ex_eng",
  "port": 9876,
  "primary_servers": [
    "10.132.145.20",
    "10.140.101.109"
  ],
  "secondary_servers": [
    "10.132.145.20",
    "10.132.145.21"
  ],
  "type": "synchronous"
}
```

Response

Status: 201, Created

| Name | Type | Description |
|-------------|---|-------------------|
| _links | _links | |
| num_records | integer | Number of records |
| records | array[fpolicy_engine] | |

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "name": "fp_ex_eng",
    "port": 9876,
    "primary_servers": [
      "10.132.145.20",
      "10.140.101.109"
    ],
    "secondary_servers": [
      "10.132.145.20",
      "10.132.145.21"
    ],
    "type": "synchronous"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|--|
| 9764885 | The primary secondary server has a redundant IP address |
| 9764953 | The name of the FPolicy engine is "native" which is reserved by the system |

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

fpolicy_engine

The engine defines how ONTAP makes and manages connections to external FPolicy servers.

| Name | Type | Description |
|-------------------|---------------|---|
| name | string | Specifies the name to assign to the external server configuration. |
| port | integer | Port number of the FPolicy server application. |
| primary_servers | array[string] | |
| secondary_servers | array[string] | |
| type | string | <p>The notification mode determines what ONTAP does after sending notifications to FPolicy servers. The possible values are:</p> <ul style="list-style-type: none">• synchronous - After sending a notification, wait for a response from the FPolicy server.• asynchronous - After sending a notification, file request processing continues.<ul style="list-style-type: none">◦ Default value: 1◦ enum: ["synchronous", "asynchronous"] |

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| next | href | |
| self | href | |

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Delete an FPolicy external engine configuration

DELETE /protocols/fpolicy/{svm.uuid}/engines/{name}

Deletes the FPolicy external engine configuration. Deletion of an FPolicy engine that is attached to one or more FPolicy policies is not allowed.

Related ONTAP commands

- `fpolicy policy external-engine modify`

Learn more

- [DOC /protocols/fpolicy/{svm.uuid}/engines](#)

Parameters

| Name | Type | In | Required | Description |
|----------|--------|------|----------|---|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| name | string | path | True | |

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|---|
| 9764940 | At least one FPolicy policy is using the FPolicy engine |
| 9764887 | The FPolicy engine is a cluster level FPolicy engine |

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Retrieve a particular FPolicy engine configuration for an SVM

GET /protocols/fpolicy/{svm.uuid}/engines/{name}

Retrieves a particular FPolicy engine configuration of a specified SVM. A cluster-level FPolicy engine configuration cannot be retrieved for a data SVM.

Related ONTAP commands

- `fpolicy policy external-engine show`

Learn more

- [DOC /protocols/fpolicy/{svm.uuid}/engines](#)

Parameters

| Name | Type | In | Required | Description |
|----------|--------|------|----------|---|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

| Name | Type | In | Required | Description |
|--------|---------------|-------|----------|-------------------------------|
| name | string | path | True | |
| fields | array[string] | query | False | Specify the fields to return. |

Response

Status: 200, Ok

| Name | Type | Description |
|-------------------|---------------|---|
| name | string | Specifies the name to assign to the external server configuration. |
| port | integer | Port number of the FPolicy server application. |
| primary_servers | array[string] | |
| secondary_servers | array[string] | |
| type | string | <p>The notification mode determines what ONTAP does after sending notifications to FPolicy servers. The possible values are:</p> <ul style="list-style-type: none"> • synchronous - After sending a notification, wait for a response from the FPolicy server. • asynchronous - After sending a notification, file request processing continues. <ul style="list-style-type: none"> ◦ Default value: 1 ◦ enum: ["synchronous", "asynchronous"] |

Example response

```
{
  "name": "fp_ex_eng",
  "port": 9876,
  "primary_servers": [
    "10.132.145.20",
    "10.140.101.109"
  ],
  "secondary_servers": [
    "10.132.145.20",
    "10.132.145.21"
  ],
  "type": "synchronous"
}
```

Error

Status: Default, Error

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Update a specific FPolicy engine configuration for an SVM

```
PATCH /protocols/fpolicy/{svm.uuid}/engines/{name}
```

Updates a specific FPolicy engine configuration of an SVM. Modification of an FPolicy engine that is attached to one or more enabled FPolicy policies is not allowed.

Related ONTAP commands

- `fpolicy policy external-engine modify`

Learn more

- [DOC /protocols/fpolicy/{svm.uuid}/engines](#)

Parameters

| Name | Type | In | Required | Description |
|----------|--------|------|----------|---|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| name | string | path | True | |

Request Body

| Name | Type | Description |
|-------------------|---------------|---|
| name | string | Specifies the name to assign to the external server configuration. |
| port | integer | Port number of the FPolicy server application. |
| primary_servers | array[string] | |
| secondary_servers | array[string] | |
| type | string | <p>The notification mode determines what ONTAP does after sending notifications to FPolicy servers. The possible values are:</p> <ul style="list-style-type: none">• synchronous - After sending a notification, wait for a response from the FPolicy server.• asynchronous - After sending a notification, file request processing continues.<ul style="list-style-type: none">◦ Default value: 1◦ enum: ["synchronous", "asynchronous"] |

Example request

```
{
  "name": "fp_ex_eng",
  "port": 9876,
  "primary_servers": [
    "10.132.145.20",
    "10.140.101.109"
  ],
  "secondary_servers": [
    "10.132.145.20",
    "10.132.145.21"
  ],
  "type": "synchronous"
}
```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|---|
| 9764922 | The primary and secondary server has a redundant IP address |
| 9764942 | At least one FPolicy policy is using the FPolicy engine |
| 9764886 | FPolicy engine is a cluster-level FPolicy engine |

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

fpolicy_engine

The engine defines how ONTAP makes and manages connections to external FPolicy servers.

| Name | Type | Description |
|-------------------|---------------|---|
| name | string | Specifies the name to assign to the external server configuration. |
| port | integer | Port number of the FPolicy server application. |
| primary_servers | array[string] | |
| secondary_servers | array[string] | |
| type | string | <p>The notification mode determines what ONTAP does after sending notifications to FPolicy servers. The possible values are:</p> <ul style="list-style-type: none">• synchronous - After sending a notification, wait for a response from the FPolicy server.• asynchronous - After sending a notification, file request processing continues.<ul style="list-style-type: none">◦ Default value: 1◦ enum: ["synchronous", "asynchronous"] |

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|-------------------|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |

| Name | Type | Description |
|-------------|-------------|---|
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

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

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

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.