

# SOL011 - NS Fault Management Interface

## Overview

SOL011 - NS Fault Management Interface IMPORTANT: Please note that this file might be not aligned to the current version of the ETSI Group Specification it refers to and has not been approved by the ETSI NFV ISG. In case of discrepancies the published ETSI Group Specification takes precedence. Please report bugs to <https://forge.etsi.org/rep/nfv/SOL011/-/issues>

## Version information

*Version* : 1.1.0-impl:etsi.org:ETSI\_NFV\_OpenAPI:1

## Contact information

*Contact* : NFV-SOL WG

## License information

*License* : ETSI Forge copyright notice

*License URL* : <https://forge.etsi.org/etsi-forge-copyright-notice.txt>

*Terms of service* : null

## URI scheme

*BasePath* : /nsfm/v1

*Schemes* : HTTP, HTTPS

## Consumes

- `application/json`

## Produces

- `application/json`

## External Docs

*Description* : ETSI GS NFV-SOL 011 V4.4.1

*URL* : [https://www.etsi.org/deliver/etsi\\_gs/NFV-SOL/001\\_099/011/04.04.01\\_60/gs\\_NFV-SOL011v040401p.pdf](https://www.etsi.org/deliver/etsi_gs/NFV-SOL/001_099/011/04.04.01_60/gs_NFV-SOL011v040401p.pdf)

# Paths

## Query alarms related to NS instances.

GET /alarms

### Description

Get Alarm List. The client can use this method to retrieve information about the alarm list.

### Parameters

| Type   | Name   | Description   | Schema |
|--------|--|---|--------|
| Header | <b>Accept</b><br><i>required</i>                 | Content-Types that are acceptable for the response. Reference: IETF RFC 7231  | string |
| Header | <b>Authorization</b><br><i>optional</i>          | The authorization token for the request. Reference: IETF RFC 7235.  | string |
| Header | <b>Version</b><br><i>required</i>                | Version of the API requested to use when responding to this request.  | string |
| Query  | <b>filter</b><br><i>optional</i>                 | Attribute-based filtering expression according to clause 5.2 of ETSI GS NFV SOL 013. The NFVO shall support receiving this parameter as part of the URI query string. The OSS/BSS may supply this parameter. The following attribute names shall be supported by the NFVO in the filter expression:<br>- id<br>- nsInstanceId<br>- rootCauseFaultyComponent.faultyNestedNsInstanceId<br>- rootCauseFaultyComponent.faultyNsVirtualLinkInstanceId<br>- rootCauseFaultyComponent.faultyVnfInstanceId<br>- rootCauseFaultyResource.faultyResourceType<br>- eventType<br>- perceivedSeverity<br>- probableCause | string |
| Query  | <b>nextpage_opaque_marker</b><br><i>optional</i> | Marker to obtain the next page of a paged response. Shall be supported by the NFVO if the NFVO supports alternative 2 (paging) according to clause 5.4.2.1 of ETSI GS NFV SOL 013.  | string |

## Responses

| HTTP Code | Description   | Schema                                    |
|-----------|---|---|
| 200       | <p>200 OK Shall be returned when information about zero or more alarms has been queried successfully. The response body shall contain the list of related alarms. If the "filter" URI parameter was supplied in the request, the data in the response body shall have been transformed according to the rules specified in clauses 5.2.2 of ETSI GS NFV-SOL 013. If the NFVO supports alternative 2 (paging) according to clause 5.4.2.1 of ETSI GS NFV-SOL 013 for this resource, inclusion of the Link HTTP header in this response shall follow the provisions in clause 5.4.2.3 of ETSI GS NFV-SOL 013.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> <p><b>Link</b> (string) : Reference to other resources. Used for paging in the present document, see clause 4.7.2.1.</p> | < <a href="#">Response 200</a> ><br>array |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |

| HTTP Code | Description  | Schema       |
|-----------|--|--------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | Response 406 |
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 500 |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | Response 503 |

## Response 200

| Name   | Description  | Schema  |
|--|--|---|
| <b>_links</b><br><i>required</i>             | Links for this resource.   | <a href="#">_links</a>  |
| <b>ackState</b><br><i>required</i>           | Acknowledgment state of the alarm. Permitted values: UNACKNOWLEDGED ACKNOWLEDGED   | enum<br>(UNACKNOWLEDGED,<br>ACKNOWLEDGED)   |
| <b>correlatedAlarmIds</b><br><i>optional</i> | List of identifiers of other alarms correlated to this fault.  | < string > array  |
| <b>eventType</b><br><i>required</i>          | The enumeration EventType represents those types of events that trigger an alarm. - COMMUNICATIONS_ALARM: An alarm of this type is associated with the procedure and/or process required conveying information from one point to another (ITU-T Recommendation X.733). - PROCESSING_ERROR_ALARM: An alarm of this type is associated with a software or processing fault (ITU-T Recommendation X.733). - ENVIRONMENTAL_ALARM: An alarm of this type is associated with a condition related to an enclosure in which the equipment resides (ITU-T Recommendation X.733). - QOS_ALARM: An alarm of this type is associated with degradation in the quality of a service (ITU-T Recommendation X.733). - EQUIPMENT_ALARM: An alarm of this type is associated with an equipment fault (ITU-T Recommendation X.733). | enum<br>(COMMUNICATIONS_ALARM,<br>PROCESSING_ERROR_ALARM,<br>ENVIRONMENTAL_ALARM,<br>QOS_ALARM,<br>EQUIPMENT_ALARM) |
| <b>faultDetails</b><br><i>optional</i>       | Provides additional information about the fault..  | < string > array  |
| <b>faultType</b><br><i>optional</i>          | Additional information to clarify the type of the fault.   | string  |
| <b>id</b><br><i>required</i>                 | An identifier with the intention of being globally unique.   | string  |
| <b>isRootCause</b><br><i>required</i>        | Attribute indicating if this fault is the root for other correlated alarms. If TRUE, then the alarms listed in the attribute CorrelatedAlarmId are caused by this fault.   | boolean   |
| <b>managedObjectId</b><br><i>required</i>    | An identifier with the intention of being globally unique.   | string  |

| Name   | Description  | Schema   |
|--|--|--|
| <b>perceivedSeverity</b><br><i>required</i>        | Indicates the relative level of urgency for operator attention. * CRITICAL: The Critical severity level indicates that a service affecting condition has occurred and an immediate corrective action is required. Such a severity can be reported, for example, when a managed object becomes totally out of service and its capability needs to be restored (ITU-T Recommendation X.733). * MAJOR: The Major severity level indicates that a service affecting condition has developed and an urgent corrective action is required. Such a severity can be reported, for example, when there is a severe degradation in the capability of the managed object and its full capability needs to be restored (ITU-T Recommendation X.733). * MINOR: The Minor severity level indicates the existence of a non-service affecting fault condition and that corrective action should be taken in order to prevent a more serious (for example, service affecting) fault. Such a severity can be reported, for example, when the detected alarm condition is not currently degrading the capacity of the managed object (ITU-T Recommendation X.733). * WARNING: The Warning severity level indicates the detection of a potential or impending service affecting fault, before any significant effects have been felt. Action should be taken to further diagnose (if necessary) and correct the problem in order to prevent it from becoming a more serious service affecting fault (ITU-T Recommendation X.733). * INDETERMINATE: The Indeterminate severity level indicates that the severity level cannot be determined (ITU-T Recommendation X.733). * CLEARED: The Cleared severity level indicates the clearing of one or more previously reported alarms. This alarm clears all alarms for this managed object that have the same Alarm type, Probable cause and Specific problems (if given) (ITU-T Recommendation X.733). | enum (CRITICAL, MAJOR, MINOR, WARNING, INDETERMINATE, CLEARED) |
| <b>probableCause</b><br><i>required</i>            | Information about the probable cause of the fault.   | string   |
| <b>rootCauseFaultyComponent</b><br><i>required</i> | This type represents the faulty component that has a negative impact on an NS. It shall comply with the provisions defined in Table 8.5.3.4-1.   | <a href="#">rootCauseFaultyComponent</a>                       |
| <b>rootCauseFaultyResource</b><br><i>optional</i>  | This type represents the faulty virtual resources that have a negative impact on a NS.   | <a href="#">rootCauseFaultyResource</a>                        |



## links

| Name                                     | Description                                | Schema                         |
|--|--|--------------------------------|
| <b>objectInstance</b><br><i>optional</i> | This type represents a link to a resource. | <a href="#">objectInstance</a> |
| <b>self</b><br><i>required</i>           | This type represents a link to a resource. | <a href="#">self</a>           |

## **objectInstance**

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

## **self**

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

## **rootCauseFaultyComponent**

| Name   | Description  | Schema |
|--|--|--------|
| <b>faultyNestedNsInstanceId</b><br><i>optional</i> | An identifier with the intention of being globally unique. | string |
| <b>faultyNsVirtualLinkId</b><br><i>optional</i>    | An identifier with the intention of being globally unique. | string |
| <b>faultyResourceType</b><br><i>optional</i>       | An identifier with the intention of being globally unique. | string |

## rootCauseFaultyResource

| Name   | Description  | Schema                           |
|--|--|----------------------------------|
| <b>faultyResource</b><br><i>required</i>     | This type represents the information that allows addressing a virtualised resource that is used by a VNF instance or by an NS instance. Information about the resource is available from the VIM.                      | <a href="#">faultyResource</a>   |
| <b>faultyResourceType</b><br><i>required</i> | The enumeration FaultyResourceType represents those types of faulty resource. Acceptable values are: - COMPUTE - Virtual compute resource. - STORAGE - Virtual storage resource. - NETWORK - Virtual network resource. | enum (COMPUTE, STORAGE, NETWORK) |

## faultyResource

| Name   | Description  | Schema |
|--|--|--------|
| <b>resourceId</b><br><i>required</i>           | An identifier maintained by the VIM or other resource provider. It is expected to be unique within the VIM instance. Representation: string of variable length.  | string |
| <b>resourceProviderId</b><br><i>optional</i>   | An identifier with the intention of being globally unique.   | string |
| <b>vimId</b><br><i>optional</i>                | An identifier with the intention of being globally unique.   | string |
| <b>vimLevelResourceType</b><br><i>optional</i> | Type of the resource in the scope of the VIM or the resource provider. The value set of the "vimLevelResourceType" attribute is within the scope of the VIM or the resource provider and can be used as information that complements the ResourceHandle. | string |

## Response 400

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced. | string (URI) |

| <b>Name</b>                      | <b>Description</b>  | <b>Schema</b> |
|----------------------------------|---|---------------|
| <b>status</b><br><i>required</i> | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>  | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>   | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

## Response 401

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 403

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 405

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 406

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 500

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 503

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## Read individual alarm.

```
GET /alarms/{alarmId}
```

## Description

The client can use this method to read an individual alarm.

## Parameters

| Type   | Name                                    | Description  | Schema |
|--------|---|--|--------|
| Header | <b>Accept</b><br><i>required</i>        | Content-Types that are acceptable for the response. Reference: IETF RFC 7231   | string |
| Header | <b>Authorization</b><br><i>optional</i> | The authorization token for the request. Reference: IETF RFC 7235.   | string |
| Header | <b>Content-Type</b><br><i>required</i>  | The MIME type of the body of the request. Reference: IETF RFC 7231   | string |
| Header | <b>Version</b><br><i>required</i>       | Version of the API requested to use when responding to this request.   | string |
| Path   | <b>alarmId</b><br><i>required</i>       | Identifier of the alarm. This identifier can be retrieved from the "id" attribute of the "alarm" attribute in the AlarmNotification or AlarmClearedNotification. It can also be retrieved from the "id" attribute of the applicable array element in the payload body of the response to a GET request to the "Alarms" resource. | string |

## Responses

| HTTP Code | Description   | Schema                       |
|-----------|---|------------------------------|
| 200       | <p>200 OK Shall be returned when information about an individual alarm has been read successfully. The response body shall contain a representation of the individual alarm.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <a href="#">Response 200</a> |



| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |

| HTTP Code | Description  | Schema       |
|-----------|--|--------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | Response 406 |
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 500 |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | Response 503 |

## Response 200

| Name   | Description  | Schema  |
|--|--|---|
| <b>_links</b><br><i>required</i>             | Links for this resource.   | <a href="#">_links</a>  |
| <b>ackState</b><br><i>required</i>           | Acknowledgment state of the alarm. Permitted values: UNACKNOWLEDGED ACKNOWLEDGED   | enum<br>(UNACKNOWLEDGED,<br>ACKNOWLEDGED)   |
| <b>correlatedAlarmIds</b><br><i>optional</i> | List of identifiers of other alarms correlated to this fault.  | < string > array  |
| <b>eventType</b><br><i>required</i>          | The enumeration EventType represents those types of events that trigger an alarm. - COMMUNICATIONS_ALARM: An alarm of this type is associated with the procedure and/or process required conveying information from one point to another (ITU-T Recommendation X.733). - PROCESSING_ERROR_ALARM: An alarm of this type is associated with a software or processing fault (ITU-T Recommendation X.733). - ENVIRONMENTAL_ALARM: An alarm of this type is associated with a condition related to an enclosure in which the equipment resides (ITU-T Recommendation X.733). - QOS_ALARM: An alarm of this type is associated with degradation in the quality of a service (ITU-T Recommendation X.733). - EQUIPMENT_ALARM: An alarm of this type is associated with an equipment fault (ITU-T Recommendation X.733). | enum<br>(COMMUNICATIONS_ALARM,<br>PROCESSING_ERROR_ALARM,<br>ENVIRONMENTAL_ALARM,<br>QOS_ALARM,<br>EQUIPMENT_ALARM) |
| <b>faultDetails</b><br><i>optional</i>       | Provides additional information about the fault..  | < string > array  |
| <b>faultType</b><br><i>optional</i>          | Additional information to clarify the type of the fault.   | string  |
| <b>id</b><br><i>required</i>                 | An identifier with the intention of being globally unique.   | string  |
| <b>isRootCause</b><br><i>required</i>        | Attribute indicating if this fault is the root for other correlated alarms. If TRUE, then the alarms listed in the attribute CorrelatedAlarmId are caused by this fault.   | boolean   |
| <b>managedObjectid</b><br><i>required</i>    | An identifier with the intention of being globally unique.   | string  |

| Name   | Description  | Schema   |
|--|--|--|
| <b>perceivedSeverity</b><br><i>required</i>        | Indicates the relative level of urgency for operator attention. * CRITICAL: The Critical severity level indicates that a service affecting condition has occurred and an immediate corrective action is required. Such a severity can be reported, for example, when a managed object becomes totally out of service and its capability needs to be restored (ITU-T Recommendation X.733). * MAJOR: The Major severity level indicates that a service affecting condition has developed and an urgent corrective action is required. Such a severity can be reported, for example, when there is a severe degradation in the capability of the managed object and its full capability needs to be restored (ITU-T Recommendation X.733). * MINOR: The Minor severity level indicates the existence of a non-service affecting fault condition and that corrective action should be taken in order to prevent a more serious (for example, service affecting) fault. Such a severity can be reported, for example, when the detected alarm condition is not currently degrading the capacity of the managed object (ITU-T Recommendation X.733). * WARNING: The Warning severity level indicates the detection of a potential or impending service affecting fault, before any significant effects have been felt. Action should be taken to further diagnose (if necessary) and correct the problem in order to prevent it from becoming a more serious service affecting fault (ITU-T Recommendation X.733). * INDETERMINATE: The Indeterminate severity level indicates that the severity level cannot be determined (ITU-T Recommendation X.733). * CLEARED: The Cleared severity level indicates the clearing of one or more previously reported alarms. This alarm clears all alarms for this managed object that have the same Alarm type, Probable cause and Specific problems (if given) (ITU-T Recommendation X.733). | enum (CRITICAL, MAJOR, MINOR, WARNING, INDETERMINATE, CLEARED) |
| <b>probableCause</b><br><i>required</i>            | Information about the probable cause of the fault.   | string   |
| <b>rootCauseFaultyComponent</b><br><i>required</i> | This type represents the faulty component that has a negative impact on an NS. It shall comply with the provisions defined in Table 8.5.3.4-1.   | <a href="#">rootCauseFaultyComponent</a>                       |
| <b>rootCauseFaultyResource</b><br><i>optional</i>  | This type represents the faulty virtual resources that have a negative impact on a NS.   | <a href="#">rootCauseFaultyResource</a>                        |

## links

| Name                                     | Description                                | Schema                         |
|--|--|--------------------------------|
| <b>objectInstance</b><br><i>optional</i> | This type represents a link to a resource. | <a href="#">objectInstance</a> |
| <b>self</b><br><i>required</i>           | This type represents a link to a resource. | <a href="#">self</a>           |

## objectInstance

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

## self

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

## rootCauseFaultyComponent

| Name   | Description  | Schema |
|--|--|--------|
| <b>faultyNestedNsInstanceId</b><br><i>optional</i> | An identifier with the intention of being globally unique. | string |
| <b>faultyNsVirtualLinkId</b><br><i>optional</i>    | An identifier with the intention of being globally unique. | string |
| <b>faultyResourceType</b><br><i>optional</i>       | An identifier with the intention of being globally unique. | string |

## rootCauseFaultyResource

| Name   | Description  | Schema                           |
|--|--|----------------------------------|
| <b>faultyResource</b><br><i>required</i>     | This type represents the information that allows addressing a virtualised resource that is used by a VNF instance or by an NS instance. Information about the resource is available from the VIM.                      | <a href="#">faultyResource</a>   |
| <b>faultyResourceType</b><br><i>required</i> | The enumeration FaultyResourceType represents those types of faulty resource. Acceptable values are: - COMPUTE - Virtual compute resource. - STORAGE - Virtual storage resource. - NETWORK - Virtual network resource. | enum (COMPUTE, STORAGE, NETWORK) |

## faultyResource

| Name   | Description  | Schema |
|--|--|--------|
| <b>resourceId</b><br><i>required</i>           | An identifier maintained by the VIM or other resource provider. It is expected to be unique within the VIM instance. Representation: string of variable length.  | string |
| <b>resourceProviderId</b><br><i>optional</i>   | An identifier with the intention of being globally unique.   | string |
| <b>vimId</b><br><i>optional</i>                | An identifier with the intention of being globally unique.   | string |
| <b>vimLevelResourceType</b><br><i>optional</i> | Type of the resource in the scope of the VIM or the resource provider. The value set of the "vimLevelResourceType" attribute is within the scope of the VIM or the resource provider and can be used as information that complements the ResourceHandle. | string |

## Response 400

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced. | string (URI) |

| Name                             | Description   | Schema       |
|----------------------------------|---|--------------|
| <b>status</b><br><i>required</i> | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>  | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>   | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## Response 401

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |



| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 403

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 405

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 406

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 500

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 503

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## Acknowledge individual alarm.

```
PATCH /alarms/{alarmId}
```

## Description

Acknowledge Alarm This method modifies an individual alarm resource.

## Parameters

| Type   | Name                                    | Description  | Schema                                 |
|--------|---|--|--|
| Header | <b>Accept</b><br><i>required</i>        | Content-Types that are acceptable for the response. Reference: IETF RFC 7231   | string                                 |
| Header | <b>Authorization</b><br><i>optional</i> | The authorization token for the request. Reference: IETF RFC 7235.   | string                                 |
| Header | <b>Content-Type</b><br><i>required</i>  | The Content-Type header shall be set to "application/merge-patch+json" according to IETF RFC 7396.   | enum<br>(application/merge-patch+json) |
| Header | <b>Version</b><br><i>required</i>       | Version of the API requested to use when responding to this request.   | string                                 |
| Path   | <b>alarmId</b><br><i>required</i>       | Identifier of the alarm. This identifier can be retrieved from the "id" attribute of the "alarm" attribute in the AlarmNotification or AlarmClearedNotification. It can also be retrieved from the "id" attribute of the applicable array element in the payload body of the response to a GET request to the "Alarms" resource. | string                                 |
| Body   | <b>body</b><br><i>required</i>          | The parameter for the alarm modification, as defined in clause 8.5.2.8.  | body                                   |

## body

| Name                               | Description  | Schema                 |
|------------------------------------|--|------------------------|
| <b>ackState</b><br><i>required</i> | New value of the "ackState" attribute in "Alarm". Permitted values: - ACKNOWLEDGED | enum<br>(ACKNOWLEDGED) |

## Responses

| HTTP Code | Description   | Schema       |
|-----------|---|--------------|
| 200       | <p>200 OK Shall be returned when the request has been accepted and completed. The response body shall contain attribute modifications for an 'Individual alarm' resource (see clause 8.5.2.4).</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 200 |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |



| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 406</a></p> |
| 409       | <p>409 CONFLICT</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | <p><a href="#">Response 409</a></p> |
| 412       | <p>412 PRECONDITION FAILED Error: A precondition given in an HTTP request header is not fulfilled. Typically, this is due to an ETag mismatch, indicating that the resource was modified by another entity. The response body should contain a ProblemDetails structure, in which the "detail" attribute should convey more information about the error.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 412</a></p> |

| HTTP Code | Description  | Schema       |
|-----------|--|--------------|
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 500 |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | Response 503 |

### Response 200

| Name                               | Description  | Schema                 |
|------------------------------------|--|------------------------|
| <b>ackState</b><br><i>required</i> | New value of the "ackState" attribute in "Alarm". Permitted values: - ACKNOWLEDGED | enum<br>(ACKNOWLEDGED) |

### Response 400

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 401

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| Name                            | Description   | Schema       |
|---------------------------------|---|--------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 403

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 405

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 406

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 409

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

## Response 412

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 500

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 503

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |



| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## POST /api\_versions

### Description

This method is not supported. When this method is requested on this resource, the API producer shall return a "405 Method Not Allowed" response

### Parameters

| Type          | Name                              | Description  | Schema |
|---------------|-----------------------------------|--|--------|
| <b>Header</b> | <b>Version</b><br><i>optional</i> | Version of the API requested to use when responding to this request. | string |

### Responses

| HTTP Code | Description   | Schema                       |
|-----------|---|------------------------------|
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <a href="#">Response 405</a> |

### Response 405

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

# Retrieve API version information

GET /api\_versions

## Description

The GET method reads API version information. This method shall follow the provisions specified in table 4.6.3.3.3.2-1 for request and response data structures, and response codes. URI query parameters are not supported.

## Parameters

| Type   | Name                              | Description  | Schema |
|--------|-----------------------------------|--|--------|
| Header | <b>Version</b><br><i>optional</i> | Version of the API requested to use when responding to this request. | string |

## Responses

| HTTP Code | Description  | Schema                       |
|-----------|--|------------------------------|
| 200       | API version information was read successfully. The response body shall contain 4.4 API version information, as defined in clause 4.4.1.13.<br><b>Headers :</b><br><b>Content-Type</b> (string) : The MIME type of the body of the response.<br><b>Version</b> (string) : The used API version. | <a href="#">Response 200</a> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |

| HTTP Code | Description  | Schema                              |
|-----------|--|-------------------------------------|
| 404       | <p>404 NOT FOUND If the API producer did not find a current representation for the resource addressed by the URI passed in the request or is not willing to disclose that one exists, it shall respond with this response code. The "ProblemDetails" structure may be provided, including in the "detail" attribute information about the source of the problem, e.g. a wrong resource URI variable. This response code is not appropriate in case the resource addressed by the URI is a container resource which is designed to contain child resources, but does not contain any child resource at the time the request is received. For a GET request to an existing empty container resource, a typical response contains a 200 OK response code and a payload body with an empty array.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 404</a></p> |
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | <p><a href="#">Response 406</a></p> |

| HTTP Code | Description  | Schema       |
|-----------|--|--------------|
| 413       | <p>413 PAYLOAD TOO LARGE If the payload body of a request is larger than the amount of data the API producer is willing or able to process, it shall respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for closing the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 413 |
| 414       | <p>414 URI TOO LONG If the request URI of a request is longer than the API producer is willing or able to process, it shall respond with this response code. This condition can e.g. be caused by passing long queries in the request URI of a GET request. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | Response 414 |
| 416       | <p>416 RANGE NOT SATISFIABLE</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | Response 416 |

| HTTP Code | Description  | Schema                              |
|-----------|--|-------------------------------------|
| 422       | <p>422 UNPROCESSABLE ENTITY If the payload body of a request contains syntactically correct data (e.g. well-formed JSON) but the data cannot be processed (e.g. because it fails validation against a schema), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. This error response code is only applicable for methods that have a request body.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 422</a></p> |
| 429       | <p>429 TOO MANY REQUESTS If the API consumer has sent too many requests in a defined period of time and the API producer is able to detect that condition ("rate limiting"), the API producer shall respond with this response code, following the provisions in IETF RFC 6585 [17] for the use of the "Retry-After" HTTP header. The "ProblemDetails" structure shall be provided and shall include in the "detail" attribute more information about the source of the problem. The period of time and allowed number of requests are configured within the API producer by means outside the scope of the present document.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 429</a></p> |



| HTTP Code | Description  | Schema       |
|-----------|--|--------------|
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 500 |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | Response 503 |
| 504       | <p>504 GATEWAY TIMEOUT If the API producer encounters a timeout while waiting for a response from an upstream server (i.e. a server that the API producer communicates with when fulfilling a request), it should respond with this response code.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | Response 504 |

## Response 200

| Name                                  | Description   | Schema                                   |
|---------------------------------------|---|--|
| <b>apiVersions</b><br><i>required</i> | Version(s) supported for the API signalled by the uriPrefix attribute.                              | < <a href="#">apiVersions</a> ><br>array |
| <b>uriPrefix</b><br><i>required</i>   | Specifies the URI prefix for the API, in the following form {apiRoot}/{apiName}/{apiMajorVersion}/. | string                                   |

### apiVersions

| Name                                   | Description  | Schema  |
|--|--|---------|
| <b>isDeprecated</b><br><i>optional</i> | The Boolean is a data type having two values (TRUE and FALSE).   | boolean |
| <b>version</b><br><i>required</i>      | Identifies a supported version. The value of the version attribute shall be a version identifier as specified in clause 4.6.1. | string  |

### Response 400

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 401

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 403

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

#### Response 404

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

#### Response 406

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 413

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 414

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 416

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

## Response 422

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |



| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 429

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 500

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 503

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

#### Response 504

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

## PUT /api\_versions

### Description

This method is not supported. When this method is requested on this resource, the API producer shall return a "405 Method Not Allowed" response

### Parameters

| Type          | Name                              | Description  | Schema |
|---------------|-----------------------------------|--|--------|
| <b>Header</b> | <b>Version</b><br><i>optional</i> | Version of the API requested to use when responding to this request. | string |

### Responses

| HTTP Code  | Description   | Schema                       |
|------------|---|------------------------------|
| <b>405</b> | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <a href="#">Response 405</a> |

### Response 405

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## DELETE /api\_versions

### Description

This method is not supported. When this method is requested on this resource, the API producer shall return a "405 Method Not Allowed" response

### Parameters

| Type          | Name                              | Description  | Schema |
|---------------|-----------------------------------|--|--------|
| <b>Header</b> | <b>Version</b><br><i>optional</i> | Version of the API requested to use when responding to this request. | string |

### Responses

| HTTP Code | Description   | Schema                       |
|-----------|---|------------------------------|
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <a href="#">Response 405</a> |

### Response 405

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

# PATCH /api\_versions

## Description

This method is not supported. When this method is requested on this resource, the API producer shall return a "405 Method Not Allowed" response

## Parameters

| Type   | Name                              | Description  | Schema |
|--------|-----------------------------------|--|--------|
| Header | <b>Version</b><br><i>optional</i> | Version of the API requested to use when responding to this request. | string |

## Responses

| HTTP Code | Description   | Schema                       |
|-----------|---|------------------------------|
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <a href="#">Response 405</a> |

## Response 405

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer      |

| Name                            | Description   | Schema       |
|---------------------------------|---|--------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## Subscribe to alarms related to NSs.

POST /subscriptions

### Description

The POST method creates a new subscription. This method shall follow the provisions specified in the Tables 8.4.4.3.1-1 and 8.4.4.3.1-2 for URI query parameters, request and response data structures, and response codes. As the result of successfully executing this method, a new "Individual subscription" resource shall exist as defined in clause 8.4.5. This method shall not trigger any notification. Creation of two subscription resources with the same callbackURI and the same filter can result in performance degradation and will provide duplicates of notifications to the OSS, and might make sense only in very rare use cases. Consequently, the NFVO may either allow creating a subscription resource if another subscription resource with the same filter and callbackUri already exists (in which case it shall return the "201 Created" response code), or may decide to not create a duplicate subscription resource (in which case it shall return a "303 See Other" response code referencing the existing subscription resource with the same filter and callbackUri).

### Parameters

| Type          | Name                             | Description  | Schema |
|---------------|----------------------------------|--|--------|
| <b>Header</b> | <b>Accept</b><br><i>required</i> | Content-Types that are acceptable for the response. Reference: IETF RFC 7231 | string |



| Type   | Name                                    | Description  | Schema               |
|--------|---|--|----------------------|
| Header | <b>Authorization</b><br><i>optional</i> | The authorization token for the request.<br>Reference: IETF RFC 7235.    | string               |
| Header | <b>Content-Type</b><br><i>required</i>  | The MIME type of the body of the request.<br>Reference: IETF RFC 7231    | string               |
| Header | <b>Version</b><br><i>required</i>       | Version of the API requested to use when responding to this request.     | string               |
| Body   | <b>body</b><br><i>required</i>          | Details of the subscription to be created, as defined in clause 8.5.2.2. | <a href="#">body</a> |

### body

| Name                                     | Description   | Schema                         |
|--|---|--------------------------------|
| <b>authentication</b><br><i>optional</i> |   | <a href="#">authentication</a> |
| <b>callbackUri</b><br><i>required</i>    | The URI of the endpoint to send the notification to.  | string (url)                   |
| <b>filter</b><br><i>optional</i>         | This type represents a subscription filter related to notifications about NS faults. It shall comply with the provisions defined in Table 8.5.3.2-1. At a particular nesting level in the filter structure, the following applies: All attributes shall match in order for the filter to match (logical "and" between different filter attributes). If an attribute is an array, the attribute shall match if at least one of the values in the array matches (logical "or" between the values of one filter attribute).. | <a href="#">filter</a>         |

### authentication

| Name  | Description  | Schema  |
|---|--|---|
| <b>authType</b><br><i>required</i>                      | Defines the types of Authentication / Authorization which the API consumer is willing to accept when receiving a notification. Permitted values: - BASIC: In every HTTP request to the notification endpoint, use HTTP Basic authentication with the client credentials. - OAUTH2_CLIENT_CREDENTIALS: In every HTTP request to the notification endpoint, use an OAuth 2.0 Bearer token, obtained using the client credentials grant type. - TLS_CERT: Every HTTP request to the notification endpoint is sent over a mutually authenticated TLS session, i.e. not only the server is authenticated, but also the client is authenticated during the TLS tunnel setup. | < enum (BASIC, OAUTH2_CLIENT_CREDENTIALS, TLS_CERT) > array |
| <b>paramsBasic</b><br><i>optional</i>                   | Parameters for authentication/authorization using BASIC. Shall be present if authType is "BASIC" and the contained information has not been provisioned out of band. Shall be absent otherwise.  | <a href="#">paramsBasic</a>                                 |
| <b>paramsOAuth2ClientCredentials</b><br><i>optional</i> | Parameters for authentication/authorization using OAUTH2_CLIENT_CREDENTIALS. Shall be present if authType is "OAUTH2_CLIENT_CREDENTIALS" and the contained information has not been provisioned out of band. Shall be absent otherwise.  | <a href="#">paramsOAuth2ClientCredentials</a>               |

### paramsBasic

| Name                               | Description  | Schema |
|------------------------------------|--|--------|
| <b>password</b><br><i>optional</i> | Password to be used in HTTP Basic authentication. Shall be present if it has not been provisioned out of band. | string |
| <b>userName</b><br><i>optional</i> | Username to be used in HTTP Basic authentication. Shall be present if it has not been provisioned out of band. | string |

### paramsOAuth2ClientCredentials

| Name                                     | Description   | Schema       |
|--|---|--------------|
| <b>clientId</b><br><i>optional</i>       | Client identifier to be used in the access token request of the OAuth 2.0 client credentials grant type. Shall be present if it has not been provisioned out of band. The clientId and clientPassword passed in a subscription shall not be the same as the clientId and clientPassword that are used to obtain authorization for API requests. Client credentials may differ between subscriptions. The value of clientPassword should be generated by a random process. | string       |
| <b>clientPassword</b><br><i>optional</i> | Client password to be used in the access token request of the OAuth 2.0 client credentials grant type. Shall be present if it has not been provisioned out of band. The clientId and clientPassword passed in a subscription shall not be the same as the clientId and clientPassword that are used to obtain authorization for API requests. Client credentials may differ between subscriptions. The value of clientPassword should be generated by a random process.   | string       |
| <b>tokenEndpoint</b><br><i>optional</i>  | String formatted according to IETF RFC 3986.  | string (uri) |

### filter

| Name  | Description   | Schema   |
|---|---|--|
| <b>eventTypes</b><br><i>optional</i>          | Match VNF alarms related to NSs with an event type listed in this attribute.      | < enum (COMMUNICATIONS_ALARM, PROCESSING_ERROR_ALARM, ENVIRONMENTAL_ALARM, QOS_ALARM, EQUIPMENT_ALARM) > array |
| <b>faultyResourceTypes</b><br><i>optional</i> | Match alarms related to NSs with a faulty resource type listed in this attribute. | < enum (COMPUTE, STORAGE, NETWORK) > array   |

| Name   | Description  | Schema   |
|--|--|--|
| <b>notificationTypes</b><br><i>optional</i>            | Match particular notification types. Permitted values: - AlarmNotification - AlarmClearedNotification - AlarmListRebuiltNotification.  | < enum (AlarmNotification, AlarmClearedNotification, AlarmListRebuiltNotification) > array |
| <b>nsInstanceSubscriptionFilter</b><br><i>optional</i> | This type represents subscription filter criteria to match NS instances. NOTE 1: The attributes "nsdIds", "vnfdIds" and "pnfdIds" are alternatives to reference to NS instances that are created based on certain NSDs, or contain VNF instances that are based on certain VNFDs, or contain PNFs that are based on certain PNFs in a filter. They should not be used together in the same filter instance, but one alternative should be chosen. NOTE 2: The attributes "nsInstanceIds" and "nsInstanceNames" are alternatives to reference to particular NS Instances in a filter. They should not be used both in the same filter instance, but one alternative should be chosen. | <a href="#">nsInstanceSubscriptionFilter</a>   |
| <b>perceivedSeverities</b><br><i>optional</i>          | Match VNF alarms with a perceived severity listed in this attribute.   | < enum (CRITICAL, MAJOR, MINOR, WARNING, INDETERMINATE, CLEARED) > array                   |
| <b>probableCauses</b><br><i>optional</i>               | Match VNF alarms with a probable cause listed in this attribute.   | < string > array   |

### nsInstanceSubscriptionFilter

| Name                                      | Description   | Schema           |
|---|---|------------------|
| <b>nsInstanceIds</b><br><i>optional</i>   | If present, match NS instances with an instance identifier listed in this attribute.  | < string > array |
| <b>nsInstanceNames</b><br><i>optional</i> | If present, match NS instances with a NS Instance Name listed in this attribute.  | < string > array |
| <b>nsdIds</b><br><i>optional</i>          | If present, match NS instances that were created based on a NSD identified by one of the nsdId values listed in this attribute. | < string > array |

| Name                              | Description  | Schema           |
|-----------------------------------|--|------------------|
| <b>pnfdIds</b><br><i>optional</i> | If present, match NS instances that contain PNFs that are represented by a PNFD identified by one of the pnfdId values listed in this attribute.             | < string > array |
| <b>vnfdIds</b><br><i>optional</i> | If present, match NS instances that contain VNF instances that were created based on a VNFD identified by one of the vnfdId values listed in this attribute. | < string > array |

## Responses

| HTTP Code  | Description  | Schema                       |
|------------|--|------------------------------|
| <b>201</b> | <p>201 Created Shall be returned when the subscription has been created successfully. The response body shall contain a representation of the created subscription resource. The HTTP response shall include a "Location:" HTTP header that points to the created subscription resource.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response. This header field shall be present if the response has a non-empty message body.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <a href="#">Response 201</a> |
| <b>303</b> | <p>303 SEE OTHER</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | No Content                   |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |

| HTTP Code | Description  | Schema                              |
|-----------|--|-------------------------------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | <p><a href="#">Response 406</a></p> |
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 500</a></p> |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | <p><a href="#">Response 503</a></p> |

## Response 201



| Name                                  | Description   | Schema                 |
|---------------------------------------|---|------------------------|
| <b>_links</b><br><i>required</i>      | Links for this resource.  | <a href="#">_links</a> |
| <b>callbackUri</b><br><i>required</i> | The URI of the endpoint to send the notification to.  | string (url)           |
| <b>filter</b><br><i>optional</i>      | This type represents a subscription filter related to notifications about NS faults. It shall comply with the provisions defined in Table 8.5.3.2-1. At a particular nesting level in the filter structure, the following applies: All attributes shall match in order for the filter to match (logical "and" between different filter attributes). If an attribute is an array, the attribute shall match if at least one of the values in the array matches (logical "or" between the values of one filter attribute).. | <a href="#">filter</a> |
| <b>id</b><br><i>required</i>          | An identifier with the intention of being globally unique.  | string                 |

### \_links

| Name                           | Description                                | Schema               |
|--------------------------------|--|----------------------|
| <b>self</b><br><i>required</i> | This type represents a link to a resource. | <a href="#">self</a> |

### **self**

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

### **filter**

| Name   | Description  | Schema   |
|--|--|--|
| <b>eventTypes</b><br><i>optional</i>                   | Match VNF alarms related to NSs with an event type listed in this attribute.   | < enum (COMMUNICATIONS_ALARM, PROCESSING_ERROR_ALARM, ENVIRONMENTAL_ALARM, QOS_ALARM, EQUIPMENT_ALARM) > array |
| <b>faultyResourceTypes</b><br><i>optional</i>          | Match alarms related to NSs with a faulty resource type listed in this attribute.  | < enum (COMPUTE, STORAGE, NETWORK) > array   |
| <b>notificationTypes</b><br><i>optional</i>            | Match particular notification types. Permitted values: - AlarmNotification - AlarmClearedNotification - AlarmListRebuiltNotification.  | < enum (AlarmNotification, AlarmClearedNotification, AlarmListRebuiltNotification) > array                     |
| <b>nsInstanceSubscriptionFilter</b><br><i>optional</i> | This type represents subscription filter criteria to match NS instances. NOTE 1: The attributes "nsdIds", "vnfdIds" and "pnfdIds" are alternatives to reference to NS instances that are created based on certain NSDs, or contain VNF instances that are based on certain VNFDs, or contain PNFs that are based on certain PNFs in a filter. They should not be used together in the same filter instance, but one alternative should be chosen. NOTE 2: The attributes "nsInstanceIds" and "nsInstanceNames" are alternatives to reference to particular NS Instances in a filter. They should not be used both in the same filter instance, but one alternative should be chosen. | <a href="#">nsInstanceSubscriptionFilter</a>   |
| <b>perceivedSeverities</b><br><i>optional</i>          | Match VNF alarms with a perceived severity listed in this attribute.   | < enum (CRITICAL, MAJOR, MINOR, WARNING, INDETERMINATE, CLEARED) > array                                       |
| <b>probableCauses</b><br><i>optional</i>               | Match VNF alarms with a probable cause listed in this attribute.   | < string > array   |

## nsInstanceSubscriptionFilter

| Name                                      | Description  | Schema           |
|---|--|------------------|
| <b>nsInstanceIds</b><br><i>optional</i>   | If present, match NS instances with an instance identifier listed in this attribute.   | < string > array |
| <b>nsInstanceNames</b><br><i>optional</i> | If present, match NS instances with a NS Instance Name listed in this attribute.   | < string > array |
| <b>nsdIds</b><br><i>optional</i>          | If present, match NS instances that were created based on a NSD identified by one of the nsdId values listed in this attribute.                              | < string > array |
| <b>pnfdIds</b><br><i>optional</i>         | If present, match NS instances that contain PNFs that are represented by a PNFD identified by one of the pnfdId values listed in this attribute.             | < string > array |
| <b>vnfdIds</b><br><i>optional</i>         | If present, match NS instances that contain VNF instances that were created based on a VNFD identified by one of the vnfdId values listed in this attribute. | < string > array |

## Response 400

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer      |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 401

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 403

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 405

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 406

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 500

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 503

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## Query multiple subscriptions.

GET /subscriptions



## Description

Query Subscription Information The client can use this method to retrieve the list of active subscriptions for alarms related to a NS subscribed by the client. It can be used e.g. for resynchronization after error situations. This method shall follow the provisions specified in the Tables 8.4.4.3.2-1 and 8.4.4.3.2-2 for URI query parameters, request and response data structures, and response codes. Table 8.4.4.3.2-1: URI query parameters supported.

## Parameters

| Type   | Name   | Description  | Schema |
|--------|--|--|--------|
| Header | <b>Accept</b><br><i>required</i>                 | Content-Types that are acceptable for the response. Reference: IETF RFC 7231   | string |
| Header | <b>Authorization</b><br><i>optional</i>          | The authorization token for the request. Reference: IETF RFC 7235.   | string |
| Header | <b>Content-Type</b><br><i>required</i>           | The MIME type of the body of the request. Reference: IETF RFC 7231   | string |
| Header | <b>Version</b><br><i>required</i>                | Version of the API requested to use when responding to this request.   | string |
| Query  | <b>filter</b><br><i>optional</i>                 | Attribute-based filtering expression according to clause 5.2 of ETSI GS NFV SOL 013. The NFVO shall support receiving this parameter as part of the URI query string. The OSS/BSS may supply this parameter. All attribute names that appear in the FmSubscription and in data types referenced from it shall be supported by the NFVO in the filter expression. | string |
| Query  | <b>nextpage_opaque_marker</b><br><i>optional</i> | Marker to obtain the next page of a paged response. Shall be supported by the NFVO if the NFVO supports alternative 2 (paging) according to clause 5.4.2.1 of ETSI GS NFV-SOL 013 for this resource.   | string |

## Responses

| HTTP Code | Description   | Schema                                 |
|-----------|---|--|
| 200       | <p>200 OK The list of subscriptions has been queried successfully. The response body shall contain in an array the representations of all active subscriptions of the functional block that invokes the method, i.e. zero or more representations of FM subscriptions, as defined in clause 8.5.2.3. If the "filter" URI parameter was supplied in the request, the data in the response body shall have been transformed according to the rules specified in clause 5.2.2 of ETSI GS NFV-SOL 013. If the NFVO supports alternative 2 (paging) according to clause 5.4.2.1 of ETSI GS NFV SOL 013 for this resource, inclusion of the Link HTTP header in this response shall follow the provisions in clause 5.4.2.3 of ETSI GS NFV SOL 013.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> <p><b>Link</b> (string) : Reference to other resources. Used for paging in the present document, see clause 4.7.2.1.</p> | < <a href="#">Response 200</a> > array |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |

| HTTP Code | Description  | Schema                              |
|-----------|--|-------------------------------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | <p><a href="#">Response 406</a></p> |
| 412       | <p>412 PRECONDITION FAILED Error: A precondition given in an HTTP request header is not fulfilled. Typically, this is due to an ETag mismatch, indicating that the resource was modified by another entity. The response body should contain a ProblemDetails structure, in which the "detail" attribute should convey more information about the error.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                                  | <p><a href="#">Response 412</a></p> |
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 500</a></p> |

| HTTP Code | Description   | Schema       |
|-----------|---|--------------|
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 503 |

## Response 200

| Name                                  | Description   | Schema                 |
|---------------------------------------|---|------------------------|
| <b>_links</b><br><i>required</i>      | Links for this resource.  | <a href="#">_links</a> |
| <b>callbackUri</b><br><i>required</i> | The URI of the endpoint to send the notification to.  | string (url)           |
| <b>filter</b><br><i>optional</i>      | This type represents a subscription filter related to notifications about NS faults. It shall comply with the provisions defined in Table 8.5.3.2-1. At a particular nesting level in the filter structure, the following applies: All attributes shall match in order for the filter to match (logical "and" between different filter attributes). If an attribute is an array, the attribute shall match if at least one of the values in the array matches (logical "or" between the values of one filter attribute).. | <a href="#">filter</a> |
| <b>id</b><br><i>required</i>          | An identifier with the intention of being globally unique.  | string                 |

## \_links

| Name                           | Description                                | Schema               |
|--------------------------------|--|----------------------|
| <b>self</b><br><i>required</i> | This type represents a link to a resource. | <a href="#">self</a> |

**self**

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

**filter**

| Name  | Description   | Schema   |
|---|---|--|
| <b>eventTypes</b><br><i>optional</i>          | Match VNF alarms related to NSs with an event type listed in this attribute.  | < enum (COMMUNICATIONS_ALARM, PROCESSING_ERROR_ALARM, ENVIRONMENTAL_ALARM, QOS_ALARM, EQUIPMENT_ALARM) > array |
| <b>faultyResourceTypes</b><br><i>optional</i> | Match alarms related to NSs with a faulty resource type listed in this attribute.   | < enum (COMPUTE, STORAGE, NETWORK) > array   |
| <b>notificationTypes</b><br><i>optional</i>   | Match particular notification types. Permitted values: - AlarmNotification - AlarmClearedNotification - AlarmListRebuiltNotification. | < enum (AlarmNotification, AlarmClearedNotification, AlarmListRebuiltNotification) > array                     |

| Name   | Description   | Schema   |
|--|---|--|
| <b>nsInstanceSubscriptionFilter</b><br><i>optional</i> | This type represents subscription filter criteria to match NS instances. NOTE 1: The attributes "nsdIds", "vnfdIds" and "pnfdIds" are alternatives to reference to NS instances that are created based on certain NSDs, or contain VNF instances that are based on certain VNFDs, or contain PNFs that are based on certain PNFDs in a filter. They should not be used together in the same filter instance, but one alternative should be chosen. NOTE 2: The attributes "nsInstanceIds" and "nsInstanceNames" are alternatives to reference to particular NS Instances in a filter. They should not be used both in the same filter instance, but one alternative should be chosen. | <a href="#">nsInstanceSubscriptionFilter</a>                             |
| <b>perceivedSeverities</b><br><i>optional</i>          | Match VNF alarms with a perceived severity listed in this attribute.  | < enum (CRITICAL, MAJOR, MINOR, WARNING, INDETERMINATE, CLEARED) > array |
| <b>probableCauses</b><br><i>optional</i>               | Match VNF alarms with a probable cause listed in this attribute.  | < string > array   |

### nsInstanceSubscriptionFilter

| Name                                      | Description  | Schema           |
|---|--|------------------|
| <b>nsInstanceIds</b><br><i>optional</i>   | If present, match NS instances with an instance identifier listed in this attribute.   | < string > array |
| <b>nsInstanceNames</b><br><i>optional</i> | If present, match NS instances with a NS Instance Name listed in this attribute.   | < string > array |
| <b>nsdIds</b><br><i>optional</i>          | If present, match NS instances that were created based on a NSD identified by one of the nsdId values listed in this attribute.                  | < string > array |
| <b>pnfdIds</b><br><i>optional</i>         | If present, match NS instances that contain PNFs that are represented by a PNFD identified by one of the pnfdId values listed in this attribute. | < string > array |



| Name                              | Description  | Schema           |
|-----------------------------------|--|------------------|
| <b>vnfdIds</b><br><i>optional</i> | If present, match NS instances that contain VNF instances that were created based on a VNFD identified by one of the vnfdId values listed in this attribute. | < string > array |

### Response 400

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 401

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 403

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

#### Response 405

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 406

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 412

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

## Response 500

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| Name                            | Description   | Schema       |
|---------------------------------|---|--------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 503

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

## Read an individual subscription.

```
GET /subscriptions/{subscriptionId}
```

### Description

Query Subscription Information The client can use this method for reading an individual subscription for alarms related to NSs subscribed by the client. This method shall follow the provisions specified in the Tables 8.4.5.3.2-1 and 8.4.5.3.2-2 for URI query parameters, request and response data structures, and response codes

### Parameters

| Type          | Name                                     | Description   | Schema |
|---------------|--|---|--------|
| <b>Header</b> | <b>Accept</b><br><i>required</i>         | Content-Types that are acceptable for the response. Reference: IETF RFC 7231  | string |
| <b>Header</b> | <b>Authorization</b><br><i>optional</i>  | The authorization token for the request. Reference: IETF RFC 7235.  | string |
| <b>Header</b> | <b>Content-Type</b><br><i>required</i>   | The MIME type of the body of the request. Reference: IETF RFC 7231  | string |
| <b>Header</b> | <b>Version</b><br><i>required</i>        | Version of the API requested to use when responding to this request.  | string |
| <b>Path</b>   | <b>subscriptionId</b><br><i>required</i> | Identifier of this subscription. This identifier can be retrieved from the resource referenced by the "Location" HTTP header in the response to a POST request creating a new subscription resource. It can also be retrieved from the "id" attribute in the payload body of that response. | string |

### Responses

| HTTP Code | Description  | Schema                              |
|-----------|--|-------------------------------------|
| 200       | <p>200 OK Shall be returned when information about an individual subscription has been read successfully. The response body shall contain a representation of the subscription resource.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the request. Reference: IETF RFC 7231.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 200</a></p> |



| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |

| HTTP Code | Description  | Schema                              |
|-----------|--|-------------------------------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | <p><a href="#">Response 406</a></p> |
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 500</a></p> |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | <p><a href="#">Response 503</a></p> |

## Response 200

| Name                                  | Description   | Schema                 |
|---------------------------------------|---|------------------------|
| <b>_links</b><br><i>required</i>      | Links for this resource.  | <a href="#">_links</a> |
| <b>callbackUri</b><br><i>required</i> | The URI of the endpoint to send the notification to.  | string (url)           |
| <b>filter</b><br><i>optional</i>      | This type represents a subscription filter related to notifications about NS faults. It shall comply with the provisions defined in Table 8.5.3.2-1. At a particular nesting level in the filter structure, the following applies: All attributes shall match in order for the filter to match (logical "and" between different filter attributes). If an attribute is an array, the attribute shall match if at least one of the values in the array matches (logical "or" between the values of one filter attribute).. | <a href="#">filter</a> |
| <b>id</b><br><i>required</i>          | An identifier with the intention of being globally unique.  | string                 |

### \_links

| Name                           | Description                                | Schema               |
|--------------------------------|--|----------------------|
| <b>self</b><br><i>required</i> | This type represents a link to a resource. | <a href="#">self</a> |

### **self**

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>href</b><br><i>required</i> | URI of a resource referenced from a notification. Should be an absolute URI (i.e. a URI that contains {apiRoot}), however, may be a relative URI (i.e. a URI where the {apiRoot} part is omitted) if the {apiRoot} information is not available. | string (url) |

### **filter**

| Name   | Description  | Schema   |
|--|--|--|
| <b>eventTypes</b><br><i>optional</i>                   | Match VNF alarms related to NSs with an event type listed in this attribute.   | < enum (COMMUNICATIONS_ALARM, PROCESSING_ERROR_ALARM, ENVIRONMENTAL_ALARM, QOS_ALARM, EQUIPMENT_ALARM) > array |
| <b>faultyResourceTypes</b><br><i>optional</i>          | Match alarms related to NSs with a faulty resource type listed in this attribute.  | < enum (COMPUTE, STORAGE, NETWORK) > array   |
| <b>notificationTypes</b><br><i>optional</i>            | Match particular notification types. Permitted values: - AlarmNotification - AlarmClearedNotification - AlarmListRebuiltNotification.  | < enum (AlarmNotification, AlarmClearedNotification, AlarmListRebuiltNotification) > array                     |
| <b>nsInstanceSubscriptionFilter</b><br><i>optional</i> | This type represents subscription filter criteria to match NS instances. NOTE 1: The attributes "nsdIds", "vnfdIds" and "pnfdIds" are alternatives to reference to NS instances that are created based on certain NSDs, or contain VNF instances that are based on certain VNFDs, or contain PNFs that are based on certain PNFs in a filter. They should not be used together in the same filter instance, but one alternative should be chosen. NOTE 2: The attributes "nsInstanceIds" and "nsInstanceNames" are alternatives to reference to particular NS Instances in a filter. They should not be used both in the same filter instance, but one alternative should be chosen. | <a href="#">nsInstanceSubscriptionFilter</a>   |
| <b>perceivedSeverities</b><br><i>optional</i>          | Match VNF alarms with a perceived severity listed in this attribute.   | < enum (CRITICAL, MAJOR, MINOR, WARNING, INDETERMINATE, CLEARED) > array                                       |
| <b>probableCauses</b><br><i>optional</i>               | Match VNF alarms with a probable cause listed in this attribute.   | < string > array   |

## nsInstanceSubscriptionFilter

| Name                                      | Description  | Schema           |
|---|--|------------------|
| <b>nsInstanceIds</b><br><i>optional</i>   | If present, match NS instances with an instance identifier listed in this attribute.   | < string > array |
| <b>nsInstanceNames</b><br><i>optional</i> | If present, match NS instances with a NS Instance Name listed in this attribute.   | < string > array |
| <b>nsdIds</b><br><i>optional</i>          | If present, match NS instances that were created based on a NSD identified by one of the nsdId values listed in this attribute.                              | < string > array |
| <b>pnfdIds</b><br><i>optional</i>         | If present, match NS instances that contain PNFs that are represented by a PNFD identified by one of the pnfdId values listed in this attribute.             | < string > array |
| <b>vnfdIds</b><br><i>optional</i>         | If present, match NS instances that contain VNF instances that were created based on a VNFD identified by one of the vnfdId values listed in this attribute. | < string > array |

## Response 400

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer      |

| Name                            | Description   | Schema       |
|---------------------------------|---|--------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 401

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 403

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 405

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |



| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 406

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| Name                            | Description   | Schema       |
|---------------------------------|---|--------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 500

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 503

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

## Terminate a subscription.

```
DELETE /subscriptions/{subscriptionId}
```

## Description

Terminate Subscription This method terminates an individual subscription. As the result of successfully executing this method, the "Individual subscription" resource shall not exist any longer. This means that no notifications for that subscription shall be sent to the formerly-subscribed API consumer. NOTE: Due to race conditions, some notifications might still be received by the formerly-subscribed API consumer for a certain time period after the deletion.

## Parameters

| Type   | Name                                     | Description   | Schema |
|--------|--|---|--------|
| Header | <b>Authorization</b><br><i>optional</i>  | The authorization token for the request. Reference: IETF RFC 7235.  | string |
| Header | <b>Version</b><br><i>required</i>        | Version of the API requested to use when responding to this request.  | string |
| Path   | <b>subscriptionId</b><br><i>required</i> | Identifier of this subscription. This identifier can be retrieved from the resource referenced by the "Location" HTTP header in the response to a POST request creating a new subscription resource. It can also be retrieved from the "id" attribute in the payload body of that response. | string |

## Responses

| HTTP Code | Description  | Schema     |
|-----------|--|------------|
| 204       | 204 - No Content Shall be returned when the subscription resource has been deleted successfully. The response body shall be empty.<br><b>Headers :</b><br><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.<br><b>Version</b> (string) : Version of the API used in the response. | No Content |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 400       | <p>400 BAD REQUEST 400 code can be returned in the following specified cases, the specific cause has to be proper specified in the "ProblemDetails" structure to be returned. If the request is malformed or syntactically incorrect (e.g. if the request URI contains incorrect query parameters or the payload body contains a syntactically incorrect data structure), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If the response to a GET request which queries a container resource would be so big that the performance of the API producer is adversely affected, and the API producer does not support paging for the affected resource, it shall respond with this response code. The "ProblemDetails" structure shall be provided, and should include in the "detail" attribute more information about the source of the problem. If there is an application error related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem. If the request contains a malformed access token, the API producer should respond with this response. The details of the error shall be returned in the WWW Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided. The use of this HTTP error response code described above is applicable to the use of the OAuth 2.0 for the authorization of API requests and notifications, as defined in clauses 4.5.3.3 and 4.5.3.4.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 400</a></p> |

| HTTP Code | Description   | Schema                              |
|-----------|---|-------------------------------------|
| 401       | <p>401 UNAUTHORIZED If the request contains no access token even though one is required, or if the request contains an authorization token that is invalid (e.g. expired or revoked), the API producer should respond with this response. The details of the error shall be returned in the WWW-Authenticate HTTP header, as defined in IETF RFC 6750 and IETF RFC 7235. The ProblemDetails structure may be provided.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | <p><a href="#">Response 401</a></p> |
| 403       | <p>403 FORBIDDEN If the API consumer is not allowed to perform a particular request to a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided. It should include in the "detail" attribute information about the source of the problem, and may indicate how to solve it.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 403</a></p> |
| 405       | <p>405 METHOD NOT ALLOWED If a particular HTTP method is not supported for a particular resource, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>   | <p><a href="#">Response 405</a></p> |

| HTTP Code | Description  | Schema       |
|-----------|--|--------------|
| 406       | <p>406 NOT ACCEPTABLE If the "Accept" header does not contain at least one name of a content type that is acceptable to the API producer, the API producer shall respond with this response code. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>  | Response 406 |
| 500       | <p>500 INTERNAL SERVER ERROR If there is an application error not related to the client's input that cannot be easily mapped to any other HTTP response code ("catch all error"), the API producer shall respond with this response code. The "ProblemDetails" structure shall be provided, and shall include in the "detail" attribute more information about the source of the problem.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p> | Response 500 |
| 503       | <p>503 SERVICE UNAVAILABLE If the API producer encounters an internal overload situation of itself or of a system it relies on, it should respond with this response code, following the provisions in IETF RFC 7231 for the use of the "Retry-After" HTTP header and for the alternative to refuse the connection. The "ProblemDetails" structure may be omitted.</p> <p><b>Headers :</b></p> <p><b>Content-Type</b> (string) : The MIME type of the body of the response.</p> <p><b>WWW-Authenticate</b> (string) : Challenge if the corresponding HTTP request has not provided authorization, or error details if the corresponding HTTP request has provided an invalid authorization token.</p> <p><b>Version</b> (string) : Version of the API used in the response.</p>                        | Response 503 |

## Response 400

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 401

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |



| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 403

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |

### Response 405

| Name                               | Description   | Schema       |
|------------------------------------|---|--------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string       |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI) |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer      |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string       |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI) |

### Response 406

| Name                             | Description  | Schema |
|----------------------------------|--|--------|
| <b>detail</b><br><i>required</i> | A human-readable explanation specific to this occurrence of the problem. | string |

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>     | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 500

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem. | integer       |

| <b>Name</b>                     | <b>Description</b>  | <b>Schema</b> |
|---------------------------------|---|---------------|
| <b>title</b><br><i>optional</i> | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |
| <b>type</b><br><i>optional</i>  | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank".  | string (URI)  |

### Response 503

| <b>Name</b>                        | <b>Description</b>  | <b>Schema</b> |
|------------------------------------|---|---------------|
| <b>detail</b><br><i>required</i>   | A human-readable explanation specific to this occurrence of the problem.  | string        |
| <b>instance</b><br><i>optional</i> | A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.   | string (URI)  |
| <b>status</b><br><i>required</i>   | The HTTP status code for this occurrence of the problem. The HTTP status code ([RFC7231], Section 6) generated by the origin server for this occurrence of the problem.   | integer       |
| <b>title</b><br><i>optional</i>    | A short, human-readable summary of the problem type. It should not change from occurrence to occurrence of the problem, except for purposes of localization. If type is given and other than "about:blank", this attribute shall also be provided. A short, human-readable summary of the problem type. It SHOULD NOT change from occurrence to occurrence of the problem, except for purposes of localization (e.g., using proactive content negotiation; see [RFC7231], Section 3.4). | string        |

| Name                           | Description  | Schema       |
|--------------------------------|--|--------------|
| <b>type</b><br><i>optional</i> | A URI reference according to IETF RFC 3986 [5] that identifies the problem type. It is encouraged that the URI provides human-readable documentation for the problem (e.g. using HTML) when dereferenced. When this member is not present, its value is assumed to be "about:blank". | string (URI) |