SOL005 - NS Lifecycle Management Notification interface

Overview

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IMPORTANT	Please note that this file might be not aligned to the current version of the ETSI Group Specification it refers to. In case of discrepancies the published ETSI Group Specification takes precedence.

In clause 4.3.2 of ETSI GS NFV-SOL 002 v2.4.1, an attribute-based filtering mechanism is defined. This mechanism is currently not included in the corresponding OpenAPI design for this GS version. Changes to the attribute-based filtering mechanism are being considered in v2.5.1 of this GS for inclusion in the corresponding future ETSI NFV OpenAPI design. Please report bugs to https://forge.etsi.org/bugzilla/buglist.cgi?component=Nfv-Openapis&list_id=61&product=NFV&resolution=

Version information

Version : 1.1.0

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 : /callback/v1
Schemes : HTTP, HTTPS

Consumes

- `application/json`

Produces

- `application/json`

External Docs

Description : ETSI GS NFV-SOL 005 V2.5.1
URL : https://www.etsi.org/deliver/etsi_gs/NFV-SOL/001_099/005/02.05.01_60/gs_NFV-SOL005v020501p.pdf

Paths

Notify about NS lifecycle change

```
POST /URI_is_provided_by_the_client_when_creating_the_subscription-
NsIdentifierCreationNotification
```

Description

The POST method delivers a notification from the server to the client. This method shall support the URI query parameters, request and response data structures, and response codes, as specified in the Tables 6.4.18.3.1-1 and 6.4.18.3.1-2.

Parameters

Type	Name	Description	Schema
Header	**Accept** *required*	Content-Types that are acceptable for the response. Reference: IETF RFC 7231	string
Header	**Authorization** *optional*	The authorization token for the request. Reference: IETF RFC 7235	string
Header	**Content-Type** *required*	The MIME type of the body of the request. Reference: IETF RFC 7231	string
Header	**Version** *required*	Version of the API requested to use when responding to this request.	string
Body	**NsIdentifierCreationNotification** *required*	A notification about the creation of a NS identifier and the related NS instance resource.	NsIdentifierCreation Notification

NsIdentifierCreationNotification

Name	Description	Schema
_links *optional*	This type represents the links to resources that a notification can contain.	_links
notificationType *optional*	Discriminator for the different notification types. Shall be set to "NsIdentifierDeletionNotification" for this notification type.	string

Name	Description	Schema
nsInstanceId *required*	An identifier with the intention of being globally unique.	string
subscriptionId *required*	An identifier with the intention of being globally unique.	string

_links

Name	Description	Schema
nsInstance *required*	This type represents a link to a resource in a notification, using an absolute or relative URI.	nsInstance
nslcmOpOcc *optional*	This type represents a link to a resource in a notification, using an absolute or relative URI.	nslcmOpOcc
subscription *optional*	This type represents a link to a resource in a notification, using an absolute or relative URI.	subscription

nsInstance

Name	Description	Schema
href *required*	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)

nslcmOpOcc

Name	Description	Schema
href *required*	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)

subscription

Name	Description	Schema
href *required*	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)

Responses

HTTP Code	Description	Schema
204	204 No Content The notification was delivered successfully. **Headers** : `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	No Content

HTTP Code	Description	Schema
400	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 400

HTTP Code	Description	Schema
401	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 401
403	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 403

HTTP Code	Description	Schema
404	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 404
405	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 405
406	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 406

HTTP Code	Description	Schema
409	409 CONFLICT **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 409
416	416 RANGE NOT SATISFIABLE **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 416
500	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. **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 500

HTTP Code	Description	Schema
503	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 503

Response 400

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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)

Notify about NS lifecycle change

```
POST /URI_is_provided_by_the_client_when_creating_the_subscription-
NsIdentifierDeletionNotification
```

Description

The POST method delivers a notification from the server to the client. This method shall support the URI query parameters, request and response data structures, and response codes, as specified in the Tables 6.4.18.3.1-1 and 6.4.18.3.1-2.

Parameters

Type	Name	Description	Schema
Header	**Accept** *required*	Content-Types that are acceptable for the response. Reference: IETF RFC 7231	string

Type	Name	Description	Schema
Header	**Authorization** *optional*	The authorization token for the request. Reference: IETF RFC 7235	string
Header	**Content-Type** *required*	The MIME type of the body of the request. Reference: IETF RFC 7231	string
Header	**Version** *required*	Version of the API requested to use when responding to this request.	string
Body	**NsIdentifierDeletionNotification** *required*	A notification about the deletion of a NS identifier and the related NS instance resource.	NsIdentifierDeletion Notification

NsIdentifierDeletionNotification

Name	Description	Schema
_links *optional*	This type represents the links to resources that a notification can contain.	_links
notificationType *optional*	Discriminator for the different notification types. Shall be set to "NsIdentifierDeletionNotification" for this notification type.	string
nsInstanceId *required*	An identifier with the intention of being globally unique.	string
subscriptionId *required*	An identifier with the intention of being globally unique.	string

_links

Name	Description	Schema
nsInstance *required*	This type represents a link to a resource in a notification, using an absolute or relative URI.	nsInstance
nslcmOpOcc *optional*	This type represents a link to a resource in a notification, using an absolute or relative URI.	nslcmOpOcc
subscription *optional*	This type represents a link to a resource in a notification, using an absolute or relative URI.	subscription

nsInstance

Name	Description	Schema
href *required*	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)

nslcmOpOcc

Name	Description	Schema
href *required*	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)

subscription

Name	Description	Schema
href *required*	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)

Responses

HTTP Code	Description	Schema
204	204 No Content The notification was delivered successfully. **Headers** : `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	No Content

HTTP Code	Description	Schema
400	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 400

HTTP Code	Description	Schema
401	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 401
403	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 403

HTTP Code	Description	Schema
404	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 404
405	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 405
406	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 406

HTTP Code	Description	Schema
409	409 CONFLICT **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 409
416	416 RANGE NOT SATISFIABLE **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 416
500	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. **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 500

HTTP Code	Description	Schema
503	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 503

Response 400

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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)

Test the notification endpoint.

```
GET /URI_is_provided_by_the_client_when_creating_the_subscription-
NsIdentifierDeletionNotification
```

Description

Query NS Instances. The GET method queries information about multiple NS instances. This method shall support the URI query parameters, request and response data structures, and response codes, as specified in the Tables 6.4.2.3.2-1 and 6.4.2.3.2-2.

Parameters

Type	Name	Description	Schema
Header	**Accept** *required*	Content-Types that are acceptable for the response. Reference: IETF RFC 7231	string

Type	Name	Description	Schema
Header	**Authorization** *optional*	The authorization token for the request. Reference: IETF RFC 7235	string
Header	**Version** *required*	Version of the API requested to use when responding to this request.	string

Responses

HTTP Code	Description	Schema
204	204 No Content The notification endpoint was tested successfully. The response body shall be empty. **Headers** : `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	No Content

HTTP Code	Description	Schema
400	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 400

HTTP Code	Description	Schema
401	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. **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 401
403	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. **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 403

HTTP Code	Description	Schema
404	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 404
405	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 405
406	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 406

HTTP Code	Description	Schema
409	409 CONFLICT **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 409
416	416 RANGE NOT SATISFIABLE **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 416
500	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. **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 500

HTTP Code	Description	Schema
503	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 503

Response 400

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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)

Notify about NS lifecycle change

```
POST /URI_is_provided_by_the_client_when_creating_the_subscription-
NsLcmOperationOccurrenceNotification
```

Description

The POST method delivers a notification from the server to the client. This method shall support the URI query parameters, request and response data structures, and response codes, as specified in the Tables 6.4.18.3.1-1 and 6.4.18.3.1-2.

Parameters

Type	Name	Description	Schema
Header	**Accept** *required*	Content-Types that are acceptable for the response. Reference: IETF RFC 7231	string

Type	Name	Description	Schema
Header	**Authorization** *optional*	The authorization token for the request. Reference: IETF RFC 7235	string
Header	**Content-Type** *required*	The MIME type of the body of the request. Reference: IETF RFC 7231	string
Header	**Version** *required*	Version of the API requested to use when responding to this request.	string
Body	**NsLcmOperationOccurrenceNotification** *required*	A notification about lifecycle changes triggered by a NS LCM. operation occurrence.	NsLcmOperationOccurrenceNotification

NsLcmOperationOccurrenceNotification

Name	Description	Schema
_links *required*	This type represents the links to resources that a notification can contain.	_links
affectedNs *optional*	Information about the SAP instances that were affected during the lifecycle operation. See note.	< affectedNs > array
affectedPnf *optional*	Information about the PNF instances that were affected during the lifecycle operation.	< affectedPnf > array
affectedSap *optional*	Information about the SAP instances that were affected during the lifecycle operation. Shall be present if the "notificationStatus" is set to "RESULT" and the operation has performed any resource modification. Shall be absent otherwise.	< affectedSap > array
affectedVl *optional*	Information about the VL instances that were affected during the lifecycle operation.	< affectedVl > array
affectedVnf *optional*	Information about the VNF instances that were affected during the lifecycle operation.	< affectedVnf > array
affectedVnffg *optional*	Information about the VNFFG instances that were affected during the lifecycle operation.	< affectedVnffg > array

Name	Description	Schema
error *optional*	The definition of the general "ProblemDetails" data structure from IETF RFC 7807 [19] is reproduced in this structure. Compared to the general framework defined in IETF RFC 7807 [19], the "status" and "detail" attributes are mandated to be included by the present document, to ensure that the response contains additional textual information about an error. IETF RFC 7807 [19] foresees extensibility of the "ProblemDetails" type. It is possible that particular APIs in the present document, or particular implementations, define extensions to define additional attributes that provide more information about the error. The description column only provides some explanation of the meaning to Facilitate understanding of the design. For a full description, see IETF RFC 7807 [19].	error
id *required*	An identifier with the intention of being globally unique.	string
isAutomaticInvocation *required*	The Boolean is a data type having two values (TRUE and FALSE).	boolean
notificationStatus *required*	Indicates whether this notification reports about the start of a NS lifecycle operation or the result of a NS lifecycle operation. Permitted values: - START: Informs about the start of the NS LCM operation occurrence. - RESULT: Informs about the final or intermediate result of the NS LCM operation occurrence.	enum (START, RESULT)
notificationType *optional*	Discriminator for the different notification types. Shall be set to "NsLcmOperationOccurrenceNotification" for this notification type.	string
nsInstanceId *required*	An identifier with the intention of being globally unique.	string
nsLcmOpOccId *required*	An identifier with the intention of being globally unique.	string

Name	Description	Schema
operation *optional*	The enumeration NsLcmOpType represents those lifecycle operations that trigger a NS lifecycle management operation occurrence notification. Value | Description ——|——— INSTANTIATE | Represents the "Instantiate NS" LCM operation. SCALE | Represents the "Scale NS" LCM operation. UPDATE | Represents the "Update NS" LCM operation. TERMINATE | Represents the "Terminate NS" LCM operation. HEAL | Represents the "Heal NS" LCM operation.	enum (INSTANTIATE, SCALE, UPDATE, TERMINATE, HEAL)
operationStat e *required*	The enumeration NsLcmOperationStateType shall comply with the provisions defined in Table 6.5.4.4-1. Value | Description ——|——— PROCESSING | The LCM operation is currently in execution. COMPLETED | The LCM operation has been completed successfully. PARTIALLY_COMPLETED | The LCM operation has been partially completed with accepTable errors. FAILED_TEMP | The LCM operation has failed and execution has stopped, but the execution of the operation is not considered to be closed. FAILED | The LCM operation has failed and it cannot be retried or rolled back, as it is determined that such action won't succeed. OLLING_BACK | The LCM operation is currently being rolled back. ROLLED_BACK | The LCM operation has been successfully rolled back, i.e. The state of the VNF prior to the original operation invocation has been restored as closely as possible.	enum (PROCESSING, COMPLETED, FAILED_TEMP, FAILED, ROLLING_BACK, ROLLED_BACK)
subscriptionI d *required*	An identifier with the intention of being globally unique.	string

_links

Name	Description	Schema
nsInstance *required*	This type represents a link to a resource in a notification, using an absolute or relative URI.	nsInstance
nslcmOpOcc *optional*	This type represents a link to a resource in a notification, using an absolute or relative URI.	nslcmOpOcc
subscription *optional*	This type represents a link to a resource in a notification, using an absolute or relative URI.	subscription

nsInstance

Name	Description	Schema
href *required*	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)

nslcmOpOcc

Name	Description	Schema
href *required*	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)

subscription

Name	Description	Schema
href *required*	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)

affectedNs

Name	Description	Schema
changeResult *required*	Signals the result of change identified by the "changeType" attribute. Permitted values: - COMPLETED - ROLLED_BACK - FAILED - PARTIALLY_COMPLETED	enum (COMPLETED, ROLLED_BACK, FAILED, PARTIALLY_COMPL ETED)
changeType *required*	Signals the type of lifecycle change. Permitted values: - ADD - REMOVE - INSTANTIATE - SCALE - UPDATE - HEAL - TERMINATE	enum (ADD, REMOVE, INSTANTIATE, SCALE, UPDATE, HEAL, TERMINATE)
nsInstanceId *required*	An identifier with the intention of being globally unique.	string

Name	Description	Schema
nsdId *required*	An identifier with the intention of being globally unique.	string

affectedPnf

Name	Description	Schema
changeResult *optional*	Signals the result of change identified by the "changeType" attribute. Permitted values: - COMPLETED - ROLLED_BACK - FAILED	enum (COMPLETED, ROLLED_BACK, FAILED)
changeType *optional*	Signals the type of change. Permitted values: - ADD - REMOVE - MODIFY	enum (ADD, REMOVE, MODIFY)
cpInstanceId *required*	Identifier of the CP in the scope of the PNF.	< string > array
pnfId *required*	An identifier with the intention of being globally unique.	string
pnfName *optional*	Name of the PNF.	string
pnfProfileId *required*	An identifier that is unique within a NS descriptor. Representation: string of variable length.	string
pnfdId *required*	An identifier that is unique within a NS descriptor. Representation: string of variable length.	string

affectedSap

Name	Description	Schema
changeResult *optional*	Signals the result of change identified by the "changeType" attribute. Permitted values: - COMPLETED - ROLLED_BACK - FAILED	enum (COMPLETED, ROLLED_BACK, FAILED)
changeType *optional*	Signals the type of lifecycle change. Permitted values: - ADD - REMOVE - MODIFY	enum (ADD, REMOVE, MODIFY)
sapInstanceId *required*	An identifier with the intention of being globally unique.	string

Name	Description	Schema
sapName *optional*	Human readable name for the SAP.	string
sapdId *required*	An identifier with the intention of being globally unique.	string

affectedVl

Name	Description	Schema
changeType *required*	Signals the type of change. Permitted values: * ADDED * REMOVED * MODIFIED * TEMPORARY * LINK_PORT_ADDED * LINK_PORT_REMOVED For a temporary resource, an AffectedVirtualLink structure exists as long as the temporary resource exists.	enum (ADDED, REMOVED, MODIFIED, TEMPORARY, LINK_PORT_ADDED, LINK_PORT_REMOVED)
id *required*	An identifier that is unique for the respective type within a VNF instance, but may not be globally unique.	string
metadata *optional*	This type represents a list of key-value pairs. The order of the pairs in the list is not significant. In JSON, a set of key-value pairs is represented as an object. It shall comply with the provisions defined in clause 4 of IETF RFC 7159.	object
networkResource *required*	This type represents the information that allows addressing a virtualised resource that is used by a VNF instance. Information about the resource is available from the VIM.	networkResource
virtualLinkDescId *required*	Identifier of the VNF Virtual Link Descriptor (VLD) in the VNFD.	string

networkResource

Name	Description	Schema
resourceId *required*	An identifier maintained by the VIM or other resource provider. It is expected to be unique within the VIM instance.	string

Name	Description	Schema
resourceProviderId *optional*	An identifier with the intention of being globally unique.	string
vimConnectionId *required*	An identifier with the intention of being globally unique.	string
vimLevelResourceType *optional*	Type of the resource in the scope of the VIM or the resource provider.	string

affectedVnf

Name	Description	Schema
changeResult *optional*	Signals the result of change identified by the "changeType" attribute. Permitted values: - COMPLETED - ROLLED_BACK - FAILED	enum (COMPLETED, ROLLED_BACK, FAILED)
changeType *optional*	Signals the type of change Permitted values: - ADD - REMOVE - INSTANTIATE - TERMINATE - SCALE - CHANGE_FLAVOUR - HEAL - OPERATE - MODIFY_INFORMATION CHANGE_EXTERNAL_VNF_CONNECTIVITY	enum (ADD, REMOVE, INSTANTIATE, TERMINATE, SCALE, CHANGE_FLAVOUR, HEAL, OPERATE, MODIFY_INFORMATION, CHANGE_EXTERNAL_VNF_CONNECTIVITY)
changedInfo *optional*	Information about the changed VNF instance information, including VNF configurable properties,if applicable. When the "changedInfo" attribute is present, either the "changedVnfInfo" attribute or the "changedExtConnectivity" attribute or both shall be present.	changedInfo
vnfInstanceId *required*	An identifier with the intention of being globally unique.	string
vnfName *optional*	Name of the VNF Instance.	string

Name	Description	Schema
vnfProfileId *required*	An identifier that is unique within a NS descriptor. Representation: string of variable length.	string
vnfdId *required*	An identifier with the intention of being globally unique.	string

changedInfo

Name	Description	Schema
changedExtConnectivity *optional*		changedExtConnectivity
changedVnfInfo *optional*	This type represents the information that is requested to be modified for a VNF instance. The information to be modified shall comply with the associated NSD. EXAMPLE. The vnfPkgId attribute value for a particular VNF instance can only be updated with a value that matches the identifier value of a VNF package whose vnfdId is present in the associated profile of the NSD.	changedVnfInfo

changedExtConnectivity

Name	Description	Schema
extLinkPorts *optional*	Link ports of this VL.	< extLinkPorts > array
id *required*	An identifier with the intention of being globally unique.	string
resourceHandle *required*	This type represents the information that allows addressing a virtualised resource that is used by a VNF instance. Information about the resource is available from the VIM.	resourceHandle

extLinkPorts

Name	Description	Schema
cpInstanceId *optional*	An identifier that is unique for the respective type within a VNF instance, but may not be globally unique.	string
id *required*	An identifier with the intention of being globally unique.	string

Name	Description	Schema
resourceHand le *required*	This type represents the information that allows addressing a virtualised resource that is used by a VNF instance. Information about the resource is available from the VIM.	resourceHandle

resourceHandle

Name	Description	Schema
resourceId *required*	An identifier maintained by the VIM or other resource provider. It is expected to be unique within the VIM instance.	string
resourceProvi derId *optional*	An identifier with the intention of being globally unique.	string
vimConnectio nId *required*	An identifier with the intention of being globally unique.	string
vimLevelReso urceType *optional*	Type of the resource in the scope of the VIM or the resource provider.	string

resourceHandle

Name	Description	Schema
resourceId *required*	An identifier maintained by the VIM or other resource provider. It is expected to be unique within the VIM instance.	string
resourceProvi derId *optional*	An identifier with the intention of being globally unique.	string
vimConnectio nId *required*	An identifier with the intention of being globally unique.	string
vimLevelReso urceType *optional*	Type of the resource in the scope of the VIM or the resource provider.	string

changedVnfInfo

Name	Description	Schema
Extensions *optional*	This type represents a list of key-value pairs. The order of the pairs in the list is not significant. In JSON, a set of key-value pairs is represented as an object. It shall comply with the provisions defined in clause 4 of IETF RFC 7159.	object
Metadata *optional*	This type represents a list of key-value pairs. The order of the pairs in the list is not significant. In JSON, a set of key-value pairs is represented as an object. It shall comply with the provisions defined in clause 4 of IETF RFC 7159.	object
vnfConfigurableProperties *optional*	This type represents a list of key-value pairs. The order of the pairs in the list is not significant. In JSON, a set of key-value pairs is represented as an object. It shall comply with the provisions defined in clause 4 of IETF RFC 7159.	object
vnfInstanceDescription *optional*	New value of the "vnfInstanceDescription" attribute in "VnfInstance", or "null" to remove the attribute.	string
vnfInstanceId *required*	An identifier with the intention of being globally unique.	string
vnfInstanceName *optional*	New value of the "vnfInstanceName" attribute in "VnfInstance", or "null" to remove the attribute.	string
vnfPkgId *optional*	An identifier with the intention of being globally unique.	string

affectedVnffg

Name	Description	Schema
changeResult *optional*	Signals the result of change identified by the "changeType" attribute. Permitted values: - COMPLETED - ROLLED_BACK - FAILED	enum (COMPLETED, ROLLED_BACK, FAILED)
changeType *optional*	Signals the type of change. Permitted values: - ADD - DELETE - MODIFY	enum (ADD, DELETE, MODIFY)
vnffgInstanceId *required*	An identifier that is unique with respect to a NS. Representation: string of variable length.	string

Name	Description	Schema
vnffgdId *required*	An identifier that is unique within a NS descriptor. Representation: string of variable length.	string

error

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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)

Responses

HTTP Code	Description	Schema
204	204 No Content The notification was delivered successfully. **Headers** : `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	No Content
400	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 400

HTTP Code	Description	Schema
401	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 401
403	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 403

HTTP Code	Description	Schema
404	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 404
405	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 405
406	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 406

HTTP Code	Description	Schema
409	409 CONFLICT **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 409
416	416 RANGE NOT SATISFIABLE **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 416
500	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. **Headers** : Content-Type (string) : The MIME type of the body of the response. WWW-Authenticate (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. Version (string) : Version of the API used in the response.	Response 500

HTTP Code	Description	Schema
503	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. **Headers** : `Content-Type` (string) : The MIME type of the body of the response. `WWW-Authenticate` (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. `Version` (string) : Version of the API used in the response.	Response 503

Response 400

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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

Name	Description	Schema
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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
detail *required*	A human-readable explanation specific to this occurrence of the problem.	string

Name	Description	Schema
instance *optional*	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	string (URI)
status *required*	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
title *optional*	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
type *optional*	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)