# SOL002 - VNF Indicator Notification Endpoint interface

# Overview

SOL002 - VNF Indicator Notification Endpoint interface IMPORTANT: Please note that this file might be not aligned to the current version of the ETSI Group Specification it refers to and has not been approved by the ETSI NFV ISG. In case of discrepancies the published ETSI Group Specification takes precedence. Please report bugs to https://forge.etsi.org/bugzilla/buglist.cgi?component=Nfv-Openapis

# **Version information**

Version : 1.2.0-impl:etsi.org:ETSI\_NFV\_OpenAPI:1

# **Contact information**

Contact : NFV-SOL WG

# License information

*License* : ETSI Forge copyright notice *License URL* : https://forge.etsi.org/etsi-forge-copyright-notice.txt *Terms of service* : null

# URI scheme

Schemes : HTTP, HTTPS

# Consumes

application/json

# Produces

application/json

# **External Docs**

Description : ETSI GS NFV-SOL 002 V2.6.1 URL : https://www.etsi.org/deliver/etsi\_gs/NFV-SOL/001\_099/002/02.06.01\_60/gs\_nfvsol002v020601p.pdf

# Paths

### **Notification endpoint**

POST /URI-is-provided-by-the-client-when-creating-thesubscription\_VnfIndicatorValueChangeNotification

### Description

The API producer can use this resource to send notifications related to VNF indicator value changes to a subscribed API consumer, which has provided the URI of this resource during the subscription process. The POST method delivers a notification from API producer to an API consumer. The API consumer shall have previously created an "Individual subscription" resource with a matching filter.

#### Parameters

Туре	Name	Description	Schema
Header	Authorization optional	The authorization token for the request. Reference: IETF RFC 7235	string
Header	<b>Version</b> required	Version of the API requested to use when responding to this request.	string
Body	vnfIndicatorV alueChangeNo tification required	A notification about VNF indicator value changes.	vnfIndicatorValueCh angeNotification

#### vnfIndicatorValueChangeNotification

Name	Description	Schema
_ <b>links</b> required	Links to resources related to this resource.	_links
<b>id</b> required	An identifier with the intention of being globally unique.	string
<b>name</b> optional	Human readable name of the VNF indicator. Shall be present if defined in the VNFD.	string

Name	Description	Schema
notificationTy pe required	Discriminator for the different notification types. Shall be set to "VnfIndicatorValueChangeNotification" for this notification type.	string
subscriptionI d required	An identifier with the intention of being globally unique.	string
<b>timeStamp</b> required	Date-time stamp. Representation: String formatted according to IETF RFC 3339.	string (date-time)
<b>value</b> required	Provides the value of the VNF indicator. The value format is defined in the VNFD.	object
<b>vnfIndicatorI</b> <b>d</b> <i>required</i>	An identifier that is unique within a VNF descriptor.	string
<b>vnfInstanceId</b> required	An identifier with the intention of being globally unique.	string

#### \_links

Name	Description	Schema
<b>subscription</b> required	This type represents a link to a resource using an absolute URI.	subscription
<b>vnfInstance</b> required	This type represents a link to a resource using an absolute URI.	vnfInstance

### subscription

Name	Description	Schema
<b>href</b> required	String formatted according to IETF RFC 3986.	string

#### vnfInstance

Name	Description	Schema
<b>href</b> required	String formatted according to IETF RFC 3986.	string

HTTP Code	Description	Schema
204	204 NO CONTENT Shall be returned when the notification has been delivered successfully. The response body shall be empty. <b>Headers</b> : Version (string) : The used API version.	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 should 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. <b>Headers : Content-Type</b> (string) : The MIME type of the body of the response. WW-Authenticate (string) : Challenge if the corresponding HTTP request has provided authorization, or error details if the corresponding HTTP request has provided authorization,	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. <b>Headers :</b> 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. <b>Headers</b> : 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
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

HTTP Code	Description	Schema
406	406 NOT ACCEPTABLE If the "Accept" HTTP 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. <b>Headers</b> : 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
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. <b>Headers</b> : 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
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

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

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<b>detail</b> required	A human-readable explanation specific to this occurrence of the problem.	string
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<b>detail</b> required	A human-readable explanation specific to this occurrence of the problem.	string
<b>instance</b> optional	A URI reference that identifies the specific occurrence of the problem. It may yield further information if string (URI dereferenced.	
<b>status</b> 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
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<b>type</b> 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 notification endpoint.

GET /URI-is-provided-by-the-client-when-creating-thesubscription\_VnfIndicatorValueChangeNotification

### Description

Service Unavailable The GET method allows the server to test the notification endpoint that is provided by the client, e.g. during subscription.

#### **Parameters**

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

HTTP Code	Description	Schema
204	204 NO CONTENT Shall be returned when the notification endpoint has been 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) : The used API version.	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 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 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 i	

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. <b>Headers :</b> 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. <b>Headers</b> : 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
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

HTTP Code	Description	Schema
406	406 NOT ACCEPTABLE If the "Accept" HTTP 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. <b>Headers</b> : 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
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. <b>Headers</b> : 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
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

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

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<b>instance</b> optional	A URI reference that identifies the specific occurrence of the problem. It may yield further information if dereferenced.	
<b>status</b> 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
<b>title</b> 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).	<u> </u>

Name	Description	Schema
<b>type</b> 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)