# SOL005 - NS Performance Management Notification interface

# **Overview**

SOL005 - NS Performance Management Notification interface 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. Please report bugs to https://forge.etsi.org/rep/nfv/SOL005/issues

#### **Version information**

Version: 2.1.0-impl:etsi.org:ETSI\_NFV\_OpenAPI:1

#### 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/v2
Schemes : HTTP, HTTPS

#### Consumes

• application/json

#### **Produces**

• application/json

#### **External Docs**

Description: ETSI GS NFV-SOL 005 V2.8.1

URL: https://www.etsi.org/deliver/etsi\_gs/NFV-SOL/001\_099/005/02.08.01\_60/gs\_NFV-

SOL005v020801p.pdf

# **Paths**

#### **POST**

# /URI\_is\_provided\_by\_the\_client\_when\_creating\_the\_su bscription-

# **PerformanceInformationAvailableNotificatio**

#### **Description**

The POST method delivers a notification regarding a performance management event from the API producer to an API consumer. The API consumer shall have previously created an "Individual PM job resource" or "Individual threshold resource". This method shall follow the provisions specified in the Tables 7.4.9.3.1-1 and 7.4.9.3.1-2 for URI query parameters, request and response data strctures, and response codes.

#### **Parameters**

Туре	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	<b>Version</b> required	Version of the API requested to use when responding to this request.	string
Body	PerformanceI nformationAv ailableNotific ation required	Notification about performance information availability.	PerformanceInform ationAvailableNotifi cation

#### PerformanceInformationAvailableNotification

Name	Description	Schema
_links required	Links to resources related to this notification.	_links
<b>id</b> required	An identifier with the intention of being globally unique.	string

Name	Description	Schema
notificationTy pe required	Discriminator for the different notification types. Shall be set to "PerformanceInformationAvailableNotification" for this notification type.	string
objectInstanc eId required	An identifier with the intention of being globally unique.	string
<b>objectType</b> required	A string as defined in IETF RFC 8259.	string
<b>pmJobId</b> required	An identifier with the intention of being globally unique.	string
subObjectInst anceIds optional	Identifiers of the sub-object instances of the measured object instance for which the measurements have been taken. Shall be present if the related PM job has been set up to measure only a subset of all sub-object instances of the measured object instance and a sub-object is defined in clause 6.2 of ETSI GS NFV-IFA 027 for the related measured object type. Shall be absent otherwise.	< string > array

#### \_links

Name	Description	Schema
objectInstanc e optional	This type represents a link to a resource in a notification, using an absolute or relative URI.	objectInstance
performanceR eport required	This type represents a link to a resource in a notification, using an absolute or relative URI.	performanceReport
<b>pmJob</b> required	This type represents a link to a resource in a notification, using an absolute or relative URI.	pmJob

#### objectInstance

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

## performance Report

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

#### pmJob

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

HTTP Code	Description	Schema
204	204 NO CONTENT Shall be returned when 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 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.	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.	
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
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
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.	

Name	Description	Schema
<b>detail</b> 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.	
<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

Name	Description	Schema
<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).	string
<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)

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

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<b>detail</b> 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.	
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
<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).	string
<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".	

Name	Description	Schema
<b>detail</b> 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.	
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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)

#### **GET**

# /URI\_is\_provided\_by\_the\_client\_when\_creating\_the\_su bscription-

# PerformanceInformationAvailableNotificatio

#### **Description**

The GET method allows the API producer to test the notification endpoint that is provided by the API consumer, e.g. during creation of the PM job or threshold resource. This method shall follow the provisions specified in the Tables 7.4.9.3.2-1 and 7.4.9.3.2-2 for URI query parameters, request and response data structures, and response codes.

#### **Parameters**

Туре	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	<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 to indicate that 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): Version of the API used in the response.	

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 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.  WW-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	

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.	
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
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
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.	

Name	Description	Schema
<b>detail</b> 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.	
<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

Name	Description	Schema
<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).	string
<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)

Name	Description	Schema
<b>detail</b> 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.	
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<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).	string

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<b>detail</b> 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.	
<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).	string
<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".	

Name	Description	Schema
<b>detail</b> 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.	
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
<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).	string
<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)

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

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)

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".	

Name	Description	Schema
<b>detail</b> 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.	
<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).	string
<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".	

#### **POST**

# /URI\_is\_provided\_by\_the\_client\_when\_creating\_the\_su bscription-ThresholdCrossedNotification

#### **Description**

The POST method delivers a notification regarding a performance management event from the API producer to an API consumer. The API consumer shall have previously created an "Individual PM job resource" or "Individual threshold resource". This method shall follow the provisions specified in the Tables 7.4.9.3.1-1 and 7.4.9.3.1-2 for URI query parameters, request and response data strctures, and response codes.

#### **Parameters**

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

Туре	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	<b>Version</b> required	Version of the API requested to use when responding to this request.	string
Body	ThresholdCro ssedNotificati on required	Notification about threshold crossing.	ThresholdCrossedNo tification

#### Threshold Crossed Notification

Name	Description	Schema
_links required	Links to resources related to this notification.	_links
<b>context</b> 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
crossingDirec tion required	The enumeration CrossingDirectionType shall comply with the provisions. Acceptable Values are: UP - The threshold was crossed in upward direction. DOWN - The threshold was crossed in downward direction.	enum (UP, DOWN)
<b>id</b> required	An identifier with the intention of being globally unique.	string
notificationTy pe required	Discriminator for the different notification types. Shall be set to "ThresholdCrossedNotification " for this notification type.	string
objectInstanc eId required	An identifier with the intention of being globally unique.	string
<b>objectType</b> required	A string as defined in IETF RFC 8259.	string

Name	Description	Schema
<b>performance Metric</b> required	Performance metric associated with the threshold. This attribute shall contain the related "Measurement Name" value as defined in clause 7.2 of ETSI GS NFV-IFA 027.	string
performanceV alue required	Value of the metric that resulted in threshold crossing. The type of this attribute shall correspond to the related "Measurement Unit" as defined in clause 7.2 of ETSI GS NFV-IFA 027.	object
subObjectInst anceId optional	An identifier that is unique with respect to a NS. Representation: string of variable length.	string
thresholdId required	An identifier with the intention of being globally unique.	string

#### \_links

Name	Description	Schema
objectInstanc e required	This type represents a link to a resource in a notification, using an absolute or relative URI.	objectInstance
threshold required	This type represents a link to a resource in a notification, using an absolute or relative URI.	threshold

## objectInstance

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

#### threshold

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

HTTP Code	Description	Schema
204	204 NO CONTENT Shall be returned when 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 not provided authorizati	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.	
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
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
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
instance 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

Name	Description	Schema
<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).	string
<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)

Name	Description	Schema
<b>detail</b> 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.	
<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).	string

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)

Name	Description	Schema
<b>detail</b> 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.	
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
<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).	string
<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".	

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

Name	Description	Schema
<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).	string
<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".	

Name	Description	Schema
<b>detail</b> 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.	
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
<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).	string
<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)

Name	Description	Schema
<b>detail</b> 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.	
<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).	

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)

Name	Description	Schema
<b>detail</b> 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.	
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
<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).	string
<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".	

Name	Description	Schema
<b>detail</b> 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.	
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
<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".	string (URI)

#### **GET**

# /URI\_is\_provided\_by\_the\_client\_when\_creating\_the\_su bscription-ThresholdCrossedNotification

## Description

The GET method allows the API producer to test the notification endpoint that is provided by the API consumer, e.g. during creation of the PM job or threshold resource. This method shall follow the provisions specified in the Tables 7.4.9.3.2-1 and 7.4.9.3.2-2 for URI query parameters, request and response data structures, and response codes.

#### **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	<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 to indicate that 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): 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 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.  WW-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	

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.	
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
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
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.	

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<b>detail</b> 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.	
<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

Name	Description	Schema
<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).	string
<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)

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