



NIDD

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OpenAPI

OpenAPI Version: 3.0.0

info

Title: 3gpp-nidd

Version: "1.0.0"

externalDocs

Description: 3GPP TS 29.122 V15.2.0 T8 reference point for Northbound APIs

URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.122/'

security

- {}

- oAuth2ClientCredentials: []

servers

URL: '{apiRoot}/3gpp-nidd/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in subclause 5.2.4 of 3GPP TS 29.122.

paths

scsAsId configurations

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': all NIDD configurations.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: '#/components/schemas/NiddConfiguration'

minItems: 0

Description: individual NIDD configuration.

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29122_CommonData.yaml#/components/responses/406'
'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'
'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'
default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

Method: Post

Request Body:

Description: Contains the data to create a NIDD configuration.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddConfiguration'

Responses:

'201' NIDD configuration is successfully created.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddConfiguration'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'
'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'
'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'
'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'
'411': Reference 'TS29122_CommonData.yaml#/components/responses/411'
'413': Reference 'TS29122_CommonData.yaml#/components/responses/413'
'415': Reference 'TS29122_CommonData.yaml#/components/responses/415'
'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'
'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

Callbacks:

niddNotifications:

'{\$request.body#/notificationDestination}':

Method: Post

Request Body:

Description: Notification for NIDD configuration status, MO NIDD, MT NIDD delivery report.

Content:

Application/JSON:

Schema:

oneOf:

- \$ref: '#/components/schemas/NiddConfigurationStatusNotification'
- \$ref: '#/components/schemas/NiddUplinkDataNotification'
- \$ref: '#/components/schemas/NiddDownlinkDataDeliveryStatusNotification'
- \$ref: '#/components/schemas/GmdNiddDownlinkDataDeliveryNotification'

Responses:

'204' Expected response to a successful callback processing without a body

'200' Expected response to a successful callback processing with a body

Content:

Application/JSON:

Schema:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Acknowledgement'

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29122_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29122_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29122_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

scsAsId configurations configurationId

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: configurationId

Description: String identifying the individual NIDD configuration resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': The individual NIDD configuration is successfully retrieved.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddConfiguration'

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29122_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

patch:

Request Body:

Description: Contains information to be applied to the individual NIDD configuration.

Required/Optional: true

Content:

application/merge-patch+json:

Schema:

Reference: '#/components/schemas/NiddConfigurationPatch'

Responses:

'200' The Individual NIDD configuration is modified successfully and a representation of that resource is returned.

Content:**Application/JSON:****Schema:**

Reference: '#/components/schemas/NiddConfiguration'

'204' The Individual NIDD configuration is modified successfully.

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29122_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29122_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29122_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

delete:**Responses:**

'204' The Individual NIDD configuration is deleted.

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

scsAsId configurations configurationId downlink-data-deliveries

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: configurationId

Description: String identifying the individual NIDD configuration resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200': all NIDD downlink data deliveries.

Content:

Application/JSON:

Schema:

Type: array

items:

Reference: [#/components/schemas/NiddDownlinkDataTransfer](#)

minItems: 0

Description: individual NIDD downlink data delivery.

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29122_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

Method: Post

Request Body:

Description: Contains the data to create a NIDD downlink data delivery.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

Responses:

'200' NIDD downlink data delivery is successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

'201' NIDD downlink data delivery is pending.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

Headers:

Location:

Description: 'Contains the URI of the newly created resource'

Required/Optional: true

Schema:

Type: string

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'411': Reference 'TS29122_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29122_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29122_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500' The NIDD downlink data delivery request was not successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataDeliveryFailure'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

scsAsId configurations configurationId downlink data deliveries downlinkDataDeliveryId

Parameters:

- name: scsAsId

Description: String identifying the SCS/AS.

In: path

Required/Optional: true

Schema:

Type: string

- name: configurationId

Description: String identifying the individual NIDD configuration resource in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

- name: downlinkDataDeliveryId

Description: String identifying the individual NIDD downlink data delivery in the SCEF.

In: path

Required/Optional: true

Schema:

Type: string

get:

Responses:

'200' The individual NIDD downlink data delivery is successfully retrieved.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'406': Reference 'TS29122_CommonData.yaml#/components/responses/406'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500': Reference 'TS29122_CommonData.yaml#/components/responses/500'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

put:

Request Body:

Description: Contains information to be applied to the individual NIDD downlink data delivery.

Required/Optional: true

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

Responses:

'200' The pending NIDD downlink data is replaced successfully but delivery is pending.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'409': Reference 'TS29122_CommonData.yaml#/components/responses/409'

'411': Reference 'TS29122_CommonData.yaml#/components/responses/411'

'413': Reference 'TS29122_CommonData.yaml#/components/responses/413'

'415': Reference 'TS29122_CommonData.yaml#/components/responses/415'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500' The NIDD downlink data replacement request was not successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataDeliveryFailure'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

delete:

Responses:

'204' The pending NIDD downlink data is deleted.

'400': Reference 'TS29122_CommonData.yaml#/components/responses/400'

'401': Reference 'TS29122_CommonData.yaml#/components/responses/401'

'403': Reference 'TS29122_CommonData.yaml#/components/responses/403'

'404': Reference 'TS29122_CommonData.yaml#/components/responses/404'

'409': Reference 'TS29122_CommonData.yaml#/components/responses/409'

'429': Reference 'TS29122_CommonData.yaml#/components/responses/429'

'500' The NIDD downlink data cancellation request was not successful.

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/NiddDownlinkDataDeliveryFailure'

'503': Reference 'TS29122_CommonData.yaml#/components/responses/503'

default: Reference 'TS29122_CommonData.yaml#/components/responses/default'

components

securitySchemes

oAuth2ClientCredentials

Type: oauth2

Flows:

clientCredentials:

tokenUrl: '{tokenUrl}'

scopes: {}

schemas

NiddConfiguration

Type: object

Properties:

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

supportedFeatures:

Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

duration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

reliableDataService:

Type: boolean

Description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPorts:

Type: array

Items:

Reference: '#/components/schemas/RdsPort'

minItems: 1

Description: Indicates the port configuration that is used for reliable data transfer between specific applications using RDS (as defined in subclause 5.2.4 and 5.2.5 of 3GPP TS 24.250).

pdnEstablishmentOption:

Reference: '#/components/schemas/PdnEstablishmentOptions'

notificationDestination:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

requestTestNotification:

Type: boolean

Description: Set to true by the SCS/AS to request the SCEF to send a test notification as defined in subclause 5.2.5.3. Set to false or omitted otherwise.

websocketNotifConfig:

Reference: 'TS29122_CommonData.yaml#/components/schemas/WebsocketNotifConfig'

maximumPacketSize:

Type: integer

Minimum: 1

Description: The Maximum Packet Size is the maximum NIDD packet size that was transferred to the UE by the SCEF in the PCO, see subclause 4.5.14.1 of 3GPP TS 23.682. If no maximum packet size was provided to the UE by the SCEF, the SCEF sends a default configured max packet size to SCS/AS. Unit bit.

readOnly: true

niddDownlinkDataTransfers:

Type: array

Items:

Reference: '#/components/schemas/NiddDownlinkDataTransfer'

minItems: 1

Description: The downlink data deliveries that needed to be executed by the SCEF. The cardinality of the property shall be 0..1 in the request and 0..N in the response (i.e. response may contain multiple buffered MT NIDD).

status:

Reference: '#/components/schemas/NiddStatus'

Required:

- notificationDestination

oneOf:

- required: [externalId]

- required: [msisdn]

- required: [externalGroupId]

NiddDownlinkDataTransfer

Type: object

Properties:

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

externalGroupId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalGroupId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

self:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

data:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

reliableDataService:

Type: boolean

Description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

rdsPort:

Reference: '#/components/schemas/RdsPort'

maximumLatency:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'

priority:

Type: integer

Description: It is used to indicate the priority of the non-IP data packet relative to other non-IP data packets.

pdnEstablishmentOption:

Reference: '#/components/schemas/PdnEstablishmentOptions'

deliveryStatus:

Reference: '#/components/schemas/DeliveryStatus'

requestedRetransmissionTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

Required: data

oneOf:

- required: [externalId]
- required: [msisdn]
- required: [externalGroupId]

NiddUplinkDataNotification

Type: object

Properties:

niddConfiguration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

data:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Bytes'

reliableDataService:

Type: boolean

Description: Indicates whether the reliable data service is enabled.

rdsPort:

Reference: '#/components/schemas/RdsPort'

Required:

- niddConfiguration

- data

oneOf:

- required: [externalId]

- required: [msisdn]

NiddDownlinkDataDeliveryStatusNotification

Type: object

Properties:

niddDownlinkDataTransfer:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

deliveryStatus:

Reference: '#/components/schemas/DeliveryStatus'

requestedRetransmissionTime:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTime'

Required:

- niddDownlinkDataTransfer

- deliveryStatus

NiddConfigurationStatusNotification

Type: object

Properties:

niddConfiguration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

externalId:

Reference: 'TS29122_CommonData.yaml#/components/schemas/ExternalId'

msisdn:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Msisdn'

status:

Reference: '#/components/schemas/NiddStatus'

rdsCapIndication:

Type: boolean

Description: It indicates whether the network capability for the reliable data service is enabled or not.

Required:

- niddConfiguration

- status

oneOf:

- required: [externalId]

- required: [msisdn]

GmdNiddDownlinkDataDeliveryNotification

Type: object

Properties:

niddDownlinkDataTransfer:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Link'

gmdResults:

Type: array

Items:

Reference: '#/components/schemas/GmdResult'

minItems: 1

Description: Indicates the group message delivery result.

Required:

- niddDownlinkDataTransfer
- gmdResults

RdsPort

Type: object

Properties:

portUE:

Reference: 'TS29122_CommonData.yaml#/components/schemas/Port'

portSCEF:**Reference:** 'TS29122_CommonData.yaml#/components/schemas/Port'**Required:**

- portUE
- portSCEF

GmdResult**Type:** object**Properties:****externalId:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ExternalId'**msisdn:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/Msisdn'**deliveryStatus:****Reference:** '#/components/schemas/DeliveryStatus'**requestedRetransmissionTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**Required:**

- deliveryStatus

oneOf:

- required: [externalId]
- required: [msisdn]

NiddDownlinkDataDeliveryFailure**Type:** object**Properties:****problemDetail:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/ProblemDetails'**requestedRetransmissionTime:****Reference:** 'TS29122_CommonData.yaml#/components/schemas/DateTime'**Required:** problemDetail**PdnEstablishmentOptions****anyOf:**

- type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- WAIT_FOR_UE: wait for the UE to establish the PDN connection
- INDICATE_ERROR: respond with an error cause
- SEND_TRIGGER: send a device trigger

PdnEstablishmentOptionsRm

anyOf:

- type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- WAIT_FOR_UE: wait for the UE to establish the PDN connection
- INDICATE_ERROR: respond with an error cause
- SEND_TRIGGER: send a device trigger

nullable: true

DeliveryStatus

anyOf:

- type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are:

- SUCCESS: Success but details not provided.
- SUCCESS_NEXT_HOP_ACKNOWLEDGED: Successful delivery to the next hop with acknowledgment
- SUCCESS_NEXT_HOP_UNACKNOWLEDGED: Successful delivery to the next hop without acknowledgment
- SUCCESS_ACKNOWLEDGED: Reliable delivery was acknowledged by the UE
- SUCCESS_UNACKNOWLEDGED: Reliable delivery was not acknowledged by the UE
- TRIGGERED: The SCEF triggered the device and is buffering the data.
- BUFFERING: The SCEF is buffering the data due to no PDN connection established.
- BUFFERING_TEMPORARILY_NOT_REACHABLE: The SCEF has been informed that the UE is temporarily not reachable but is buffering the data
- SENDING: The SCEF has forwarded the data, but they may be stored elsewhere
- FAILURE: Delivery failure but details not provided

- FAILURE_RDS_DISABLED: RDS was disabled
- FAILURE_NEXT_HOP: Unsuccessful delivery to the next hop.
- FAILURE_TIMEOUT: Unsuccessful delivery due to timeout.

readOnly: true

NiddStatus

anyOf: type: string

This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.

Possible values are

- ACTIVE: The NIDD configuration is active.
- TERMINATED_UE_NOT_AUTHORIZED: The NIDD configuration was terminated because the UExB4s authorisation was revoked.
- TERMINATED: The NIDD configuration was terminated.

readOnly: true

NiddConfigurationPatch

Type: object

Properties:

duration:

Reference: 'TS29122_CommonData.yaml#/components/schemas/DateTimeRm'

reliableDataService:

Type: boolean

Description: The reliable data service (as defined in subclause 4.5.15.3 of 3GPP TS 23.682) to indicate if a reliable data service acknowledgment is enabled or not.

nullable: true

rdsPorts:

Type: array

Items:

Reference: '#/components/schemas/RdsPort'

minItems: 1

Description: Indicates the port configuration that is used for reliable data transfer between specific applications using RDS (as defined in subclause 5.2.4 and 5.2.5 of 3GPP TS 24.250).

pdnEstablishmentOption:

Reference: '#/components/schemas/PdnEstablishmentOptionsRm'

