Namf_EventExposure

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OpenAPI

OpenAPI Version: 3.0.0

Info

Version: 1.1.2

Title: Namf_EventExposure

Description: |

AMF Event Exposure Service

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Servers

URL: '{apiRoot}/namf-evts/v1'

Variables:

API Root:

Default: https://example.com

Description: apiRoot as defined in clause clause 4.4 of 3GPP TS 29.501

Security

```
- {}
- oAuth2ClientCredentials:
    - namf-evts
```

Paths

/subscriptions:

Method: Post

Summary: Namf_EventExposure Subscribe service Operation

Tags:

- Subscriptions collection (Document)

Operation ID: CreateSubscription

Request Body:

Content:

Application/JSON:

Schema:

Reference: '#/components/schemas/AmfCreateEventSubscription'

Required/Optional: true

Responses:

'201':

Description: Subsription Created

Headers:

Location:

```
          description: 'Contains the URI of the newly created resource,
according to the structure:
{apiRoot}/namf-evts/apiVersion/subscriptions/{subscriptionId}'

          Required/Optional: true

          Schema:

            Type: string

        Content:

          Application/JSON:

            Schema:

              Reference: '#/components/schemas/AmfCreatedEventSubscription'

      '307':

        Description: temporary redirect

        Content:

          application/problem+json:

            Schema:

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

        Headers:

          Location:

            Description: 'An alternative URI of the resource located on an alternative
service instance within the same AMF or AMF (service) set'

            Required/Optional: true

            Schema:

              Type: string

          3gpp-Sbi-Target-Nf-Id:

            Description: ' Identifier of the target NF (service) instance ID towards
which the request is redirected'

            Schema:

              Type: string

      '308':

        Description: permanent redirect
```

```
      Content:
        application/problem+json:
          Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
      Headers:
        Location:
          Description: 'An alternative URI of the resource located on an alternative
service instance within the same AMF or AMF (service) set'
          Required/Optional: true
          Schema:
            Type: string
        3gpp-Sbi-Target-Nf-Id:
          Description: ' Identifier of the target NF (service) instance ID towards
which the request is redirected'
          Schema:
            Type: string
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      Reference: 'TS29571_CommonData.yaml#/components/responses/403'
    '411':
      Reference: 'TS29571_CommonData.yaml#/components/responses/411'
    '413':
      Reference: 'TS29571_CommonData.yaml#/components/responses/413'
    '415':
      Reference: 'TS29571_CommonData.yaml#/components/responses/415'
    '429':
      Reference: 'TS29571_CommonData.yaml#/components/responses/429'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
```

```
      '503':
        Reference: 'TS29571_CommonData.yaml#/components/responses/503'
      Default:
        Description: Unexpected error
    Callbacks:
      onEventReport:
        '{$request.body#/subscription/eventNotifyUri}':
          Method: Post
            Summary: Event Notificaiton Delivery
            Request Body:
              Content:
                Application/JSON:
                  Schema:
                    Reference: '#/components/schemas/AmfEventNotification'
              Required/Optional: true
            Responses:
              '204':
                Description: Successful acknowledgement
              '307':
                Description: temporary redirect
                Content:
                  application/problem+json:
                    Schema:
                      Reference:
'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
                Headers:
                  Location:
                    Description: 'An alternative URI of the NF service consumer to which
 the notification should be sent'
```

```
                  Required/Optional: true
                  Schema:
                    Type: string
                3gpp-Sbi-Target-Nf-Id:
                  Description: ' Identifier of the target NF (service) instance ID
towards which the request is redirected'
                  Schema:
                    Type: string
            '308':
              Description: permanent redirect
              Content:
                application/problem+json:
                  Schema:
                    Reference:
'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
              Headers:
                Location:
                  Description: 'An alternative URI of the NF service consumer to which
 the notification should be sent'
                  Required/Optional: true
                  Schema:
                    Type: string
                3gpp-Sbi-Target-Nf-Id:
                  Description: ' Identifier of the target NF (service) instance ID
towards which the request is redirected'
                  Schema:
                    Type: string
            '400':
              Reference: 'TS29571_CommonData.yaml#/components/responses/400'
            '411':
              Reference: 'TS29571_CommonData.yaml#/components/responses/411'
```

```
        '413':
          Reference: 'TS29571_CommonData.yaml#/components/responses/413'
        '415':
          Reference: 'TS29571_CommonData.yaml#/components/responses/415'
        '429':
          Reference: 'TS29571_CommonData.yaml#/components/responses/429'
        '500':
          Reference: 'TS29571_CommonData.yaml#/components/responses/500'
        '503':
          Reference: 'TS29571_CommonData.yaml#/components/responses/503'
        Default:
          Description: Unexpected error
onSubscriptionIdChangeEvtReport:
  '{$request.body#/subscription/subsChangeNotifyUri}':
    Method: Post
      Summary: Event Notificaiton Delivery For Subscription Id Change
      Request Body:
        Content:
          Application/JSON:
            Schema:
              Reference: '#/components/schemas/AmfEventNotification'
        Required/Optional: true
      Responses:
        '204':
          Description: Successful acknowledgement
        '307':
          Description: temporary redirect
          Content:
            application/problem+json:
```

```
                    Schema:

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

                  Headers:

                    Location:

                      Description: 'An alternative URI of the NF service consumer to which
 the notification should be sent'

                      Required/Optional: true

                      Schema:

                        Type: string

                    3gpp-Sbi-Target-Nf-Id:

                      Description: ' Identifier of the target NF (service) instance ID
towards which the request is redirected'

                      Schema:

                        Type: string

                '308':

                  Description: permanent redirect

                  Content:

                    application/problem+json:

                      Schema:

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

                  Headers:

                    Location:

                      Description: 'An alternative URI of the NF service consumer to which
 the notification should be sent'

                      Required/Optional: true

                      Schema:

                        Type: string

                    3gpp-Sbi-Target-Nf-Id:

                      Description: ' Identifier of the target NF (service) instance ID
towards which the request is redirected'
```

```
          Schema:
            Type: string
        '400':
          Reference: 'TS29571_CommonData.yaml#/components/responses/400'
        '411':
          Reference: 'TS29571_CommonData.yaml#/components/responses/411'
        '413':
          Reference: 'TS29571_CommonData.yaml#/components/responses/413'
        '415':
          Reference: 'TS29571_CommonData.yaml#/components/responses/415'
        '429':
          Reference: 'TS29571_CommonData.yaml#/components/responses/429'
        '500':
          Reference: 'TS29571_CommonData.yaml#/components/responses/500'
        '503':
          Reference: 'TS29571_CommonData.yaml#/components/responses/503'
        Default:
          Description: Unexpected error
```

Components

```
securitySchemes:
  oAuth2ClientCredentials:
    Type: oauth2
    Flows:
      clientCredentials:
        tokenUrl: '{nrfApiRoot}/oauth2/token'
        scopes:
```

```
        namf-evts: Access to the Namf_EventExposure API
schemas:
  AmfEventSubscription:
    Type: object
    Properties:
      eventList:
        Type: array
        Items:
          Reference: '#/components/schemas/AmfEvent'
        minItems: 1
      eventNotifyUri:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      notifyCorrelationId:
        Type: string
      nfId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
      subsChangeNotifyUri:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      subsChangeNotifyCorrelationId:
        Type: string
      supi:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
      groupId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/GroupId'
      gpsi:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
      pei:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
      anyUE:
```

```
      Type: boolean
    options:
      Reference: '#/components/schemas/AmfEventMode'
  Required:
    - eventList
    - eventNotifyUri
    - notifyCorrelationId
    - nfId
AmfEvent:
  Type: object
  Properties:
    Type:
      Reference: '#/components/schemas/AmfEventType'
    immediateFlag:
      Type: boolean
      Default: false
    areaList:
      Type: array
      Items:
        Reference: '#/components/schemas/AmfEventArea'
      minItems: 1
    locationFilterList:
      Type: array
      Items:
        Reference: '#/components/schemas/LocationFilter'
      minItems: 1
    refId:
      Reference: 'TS29503_Nudm_EE.yaml#/components/schemas/ReferenceId'
    trafficDescriptorList:
```

```
      Type: array
      Items:
        Reference: '#/components/schemas/TrafficDescriptor'
      minItems: 1
    reportUeReachable:
      Type: boolean
      Default: false
    reachabilityFilter:
      Reference: '#/components/schemas/ReachabilityFilter'
    maxReports:
      Type: integer
  Required:
    - type
AmfEventNotification:
  Type: object
  Properties:
    notifyCorrelationId:
      Type: string
    subsChangeNotifyCorrelationId:
      Type: string
    reportList:
      Type: array
      Items:
        Reference: '#/components/schemas/AmfEventReport'
      minItems: 1
    eventSubsSyncInfo:
      Reference: '#/components/schemas/AmfEventSubsSyncInfo'
AmfEventReport:
```

```
Type: object
Properties:
  Type:
    Reference: '#/components/schemas/AmfEventType'
  state:
    Reference: '#/components/schemas/AmfEventState'
  timeStamp:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  subscriptionId:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  anyUe:
    Type: boolean
  supi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
  areaList:
    Type: array
    Items:
      Reference: '#/components/schemas/AmfEventArea'
    minItems: 1
  refId:
    Reference: 'TS29503_Nudm_EE.yaml#/components/schemas/ReferenceId'
  gpsi:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
  pei:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  location:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/UserLocation'
  timezone:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/TimeZone'
```

```
accessTypeList:
  Type: array
  Items:
    Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
  minItems: 1
rmInfoList:
  Type: array
  Items:
    Reference: '#/components/schemas/RmInfo'
  minItems: 1
cmInfoList:
  Type: array
  Items:
    Reference: '#/components/schemas/CmInfo'
  minItems: 1
reachability:
  Reference: '#/components/schemas/UeReachability'
commFailure:
  Reference: '#/components/schemas/CommunicationFailure'
lossOfConnectReason:
  Reference: '#/components/schemas/LossOfConnectivityReason'
numberOfUes:
  Type: integer
5gsUserStateList:
  Type: array
  Items:
    Reference: '#/components/schemas/5GsUserStateInfo'
  minItems: 1
```

```
    typeCode:
      Type: string
      Pattern: '^imeitac-[0-9]{8}$'
    registrationNumber:
      Type: integer
    maxAvailabilityTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    ueIdExt:
      Type: array
      Items:
        Reference: '#/components/schemas/UEIdExt'
      minItems: 1
  Required:
    - type
    - state
    - timeStamp
AmfEventMode:
  Type: object
  Properties:
    trigger:
      Reference: '#/components/schemas/AmfEventTrigger'
    maxReports:
      Type: integer
    expiry:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    repPeriod:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    sampRatio:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SamplingRatio'
```

```
    Required:
      - trigger
  AmfEventState:
    Type: object
    Properties:
      active:
        Type: boolean
      remainReports:
        Type: integer
      remainDuration:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DurationSec'
    Required:
      - active
  RmInfo:
    Type: object
    Properties:
      rmState:
        Reference: '#/components/schemas/RmState'
      accessType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    Required:
      - rmState
      - accessType
  CmInfo:
    Type: object
    Properties:
      cmState:
        Reference: '#/components/schemas/CmState'
      accessType:
```

```
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
  Required:
    - cmState
    - accessType
CommunicationFailure:
  Type: object
  Properties:
    nasReleaseCode:
      Type: string
    ranReleaseCode:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NgApCause'
AmfCreateEventSubscription:
  Type: object
  Properties:
    subscription:
      Reference: '#/components/schemas/AmfEventSubscription'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    oldGuami:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
  Required:
    - subscription
AmfCreatedEventSubscription:
  Type: object
  Properties:
    subscription:
      Reference: '#/components/schemas/AmfEventSubscription'
    subscriptionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
```

```
    reportList:
      Type: array
      Items:
        Reference: '#/components/schemas/AmfEventReport'
      minItems: 1
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  Required:
    - subscription
    - subscriptionId
AmfUpdateEventSubscriptionItem:
  Type: array
  Items:
    Type: object
    Properties:
      op:
        Type: string
        enum:
          - add
          - remove
          - replace
      path:
        Type: string
        Pattern: '\/eventList\/[0-]$|\/eventList\/[1-9][0-9]*$'
      value:
        Reference: '#/components/schemas/AmfEvent'
    Required:
      - op
      - path
  minItems: 1
```

```
AmfUpdateEventOptionItem:
  Type: object
  Properties:
    op:
      Type: string
      enum:
        - replace
    path:
      Type: string
      Pattern: '\/options\/expiry$'
    value:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
  Required:
    - op
    - path
    - value
AmfUpdatedEventSubscription:
  Type: object
  Properties:
    subscription:
      Reference: '#/components/schemas/AmfEventSubscription'
    reportList:
      Type: array
      Items:
        Reference: '#/components/schemas/AmfEventReport'
      minItems: 1
  Required:
    - subscription
AmfEventArea:
```

```
    Type: object
    Properties:
      presenceInfo:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceInfo'
      ladnInfo:
        Reference: '#/components/schemas/LadnInfo'
      sNssai:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
      nsiId:
        Reference: 'TS29531_Nnssf_NSSelection.yaml#/components/schemas/NsiId'
  LadnInfo:
    Type: object
    Properties:
      ladn:
        Type: string
      presence:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/PresenceState'
    Required:
      - ladn
  5GsUserStateInfo:
    Type: object
    Properties:
      5gsUserState:
        Reference: '#/components/schemas/5GsUserState'
      accessType:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    Required:
      - 5gsUserState
      - accessType
```

```
TrafficDescriptor:
  Type: object
  Properties:
    dnn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    sNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dddTrafficDescriptorList:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/DddTrafficDescriptor'
      minItems: 1
UEIdExt:
  Type: object
  Properties:
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'


AmfEventSubsSyncInfo:
  Type: object
  Properties:
    subscriptionList:
      Type: array
      Items:
        Reference: '#/components/schemas/AmfEventSubscriptionInfo'
      minItems: 1
```

```
  Required:
    - subscriptionList

AmfEventSubscriptionInfo:
  Type: object
  Properties:
    subId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    notifyCorrelationId:
      Type: string
    refIdList:
      Type: array
      Items:
        Reference: 'TS29503_Nudm_EE.yaml#/components/schemas/ReferenceId'
      minItems: 1
    oldSubId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
  Required:
    - subId
    - refIdList

AmfEventType:
  anyOf:
  - type: string
    enum:
      - LOCATION_REPORT
      - PRESENCE_IN_AOI_REPORT
      - TIMEZONE_REPORT
      - ACCESS_TYPE_REPORT
      - REGISTRATION_STATE_REPORT
```

```
        - CONNECTIVITY_STATE_REPORT
        - REACHABILITY_REPORT
        - COMMUNICATION_FAILURE_REPORT
        - UES_IN_AREA_REPORT
        - SUBSCRIPTION_ID_CHANGE
        - SUBSCRIPTION_ID_ADDITION
        - LOSS_OF_CONNECTIVITY
        - 5GS_USER_STATE_REPORT
        - AVAILABILITY_AFTER_DDN_FAILURE
        - TYPE_ALLOCATION_CODE_REPORT
        - FREQUENT_MOBILITY_REGISTRATION_REPORT
    - type: string
AmfEventTrigger:
  anyOf:
  - type: string
    enum:
      - ONE_TIME
      - CONTINUOUS
      - PERIODIC
  - type: string
LocationFilter :
  anyOf:
  - type: string
    enum:
      - TAI
      - CELL_ID
      - N3IWF
      - UE_IP
      - UDP_PORT
      - TNAP_ID
      - GLI
      - TWAP_ID
```

```
  - type: string
UeReachability:
  anyOf:
  - type: string
    enum:
      - UNREACHABLE
      - REACHABLE
      - REGULATORY_ONLY
  - type: string
RmState:
  anyOf:
  - type: string
    enum:
      - REGISTERED
      - DEREGISTERED
  - type: string
CmState:
  anyOf:
  - type: string
    enum:
      - IDLE
      - CONNECTED
  - type: string
5GsUserState:
  anyOf:
  - type: string
    enum:
      - DEREGISTERED
      - REGISTERED_NOT_REACHABLE_FOR_PAGING
      - REGISTERED_REACHABLE_FOR_PAGING
```

```
      - CONNECTED_NOT_REACHABLE_FOR_PAGING
      - CONNECTED_REACHABLE_FOR_PAGING
      - NOT_PROVIDED_FROM_AMF
  - type: string
LossOfConnectivityReason:
  anyOf:
  - type: string
    enum:
      - DEREGISTERED
      - MAX_DETECTION_TIME_EXPIRED
      - PURGED
  - type: string


ReachabilityFilter:
  anyOf:
  - type: string
    enum:
      - UE_REACHABILITY_STATUS_CHANGE
      - UE_REACHABLE_DL_TRAFFIC
  - type: string
```

External Docs

```
Description: 3GPP TS 29.518 V16.6.0; 5G System; Access and Mobility Management Services
URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.518/'
```