

Nudm_UECM

The Nudm Context Management Service provides the NF consumer of the information related to UE's transaction information, allows the NF consumer to register and deregister its information for the serving UE in the UDM, and allows the NF consumer to update some UE context information in the UDM.

Reference: 3GPP TS 29.503 Unified Data Management Services, version 15.3.0

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OpenAPI

OpenAPI Version: 3.0.0

Info

```
Version: '1.1.0.alpha-3'
Title: 'Nudm_UECM'
Description: |
  Nudm Context Management Service.
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```

Servers

```
  URL: '{apiRoot}/nudm-uecm/v1'
  Variables:
    API Root:
```

```
      Default: https://example.com
      Description: apiRoot as defined in clause clause 4.4 of 3GPP TS 29.501.
```

Security

```
- oAuth2ClientCredentials:
  - nudm-uecm
- {}
```

Paths

/{ueId}/registrations/amf-3gpp-access

```
  put:
    Summary: register as AMF for 3GPP access
    Operation ID: 3GppRegistration

    Tags:
      - AMF registration for 3GPP access

    Parameters:
      - Name: ueId
        In: path
        Description: Identifier of the UE
        Required/Optional: true
        Schema:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    Request Body:
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/Amf3GppAccessRegistration'
      Required/Optional: true

    Responses:
      '201':
        Description: Created
        Content:
          Application/JSON:
            Schema:
              Reference: '#/components/schemas/Amf3GppAccessRegistration'
        Headers:
          Location:
            description: 'Contains the URI of the newly created resource,
according to the structure:
{apiRoot}/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access'
            Required/Optional: true
```

```
        Schema:
          Type: string
    '200':
      Description: OK
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/Amf3GppAccessRegistration'
    '204':
      Description: No content
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      Reference: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
    Default:
      Description: Unexpected error
Callbacks:
  deregistrationeNotification:
    '{request.body#/deregCallbackUri}':
      Method: Post
        Request Body:
          Required/Optional: true
          Content:
            Application/JSON:
              Schema:
                Reference: '#/components/schemas/DeregistrationData'

        Responses:
          '204':
            Description: Successful Notification response
          '400':
            Reference: 'TS29571_CommonData.yaml#/components/responses/400'
          '404':
            Reference: 'TS29571_CommonData.yaml#/components/responses/404'
          '500':
            Reference: 'TS29571_CommonData.yaml#/components/responses/500'
          '503':
            Reference: 'TS29571_CommonData.yaml#/components/responses/503'
          Default:
            Description: Unexpected error
  pcscfRestorationNotification:
    '{request.body#/pcscfRestorationCallbackUri}':
      Method: Post
        Request Body:
          Required/Optional: true
          Content:
```

```
            Application/JSON:
              Schema:
                Reference: '#/components/schemas/PcscfRestorationNotification'

          Responses:
            '204':
              Description: Successful Notification response
            '400':
              Reference: 'TS29571_CommonData.yaml#/components/responses/400'
            '404':
              Reference: 'TS29571_CommonData.yaml#/components/responses/404'
            '500':
              Reference: 'TS29571_CommonData.yaml#/components/responses/500'
            '503':
              Reference: 'TS29571_CommonData.yaml#/components/responses/503'
            Default:
              Description: Unexpected error
patch:
  Summary: Update a parameter in the AMF registration for 3GPP access
  Operation ID: Update3GppRegistration

  Tags:
    - Parameter update in the AMF registration for 3GPP access

  Parameters:
    - Name: ueId
      In: path
      Description: Identifier of the UE
      Required/Optional: true
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    - Name: supported-features
      In: query
      Description: Features required to be supported by the target NF
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  Request Body:
    Content:
      application/merge-patch+json:
        Schema:
          Reference: '#/components/schemas/Amf3GppAccessRegistrationModification'
    Required/Optional: true

  Responses:
    '200':
      Description: Expected response to a valid request
      Content:
        Application/JSON:
          Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/PatchResult'
    '204':
      Description: Expected response to a valid request
```

```
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      Reference: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '422':
      Description: Unprocessable Request
      Content:
        application/problem+json:
          Schema:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/ProblemDetails'
    '500':
      Reference: 'TS29571_CommonData.yaml#/components/responses/500'
    '503':
      Reference: 'TS29571_CommonData.yaml#/components/responses/503'
    Default:
      Description: Unexpected error
get:
  Summary: retrieve the AMF registration for 3GPP access information
  Operation ID: Get3GppRegistration

  Tags:
    - AMF 3Gpp-access Registration Info Retrieval

  Parameters:
    - Name: ueId
      In: path
      Description: Identifier of the UE
      Required/Optional: true
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/VarUeId'
    - Name: supported-features
      In: query
      Schema:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'

  Responses:
    '200':
      Description: Expected response to a valid request
      Content:
        Application/JSON:
          Schema:
            Reference: '#/components/schemas/Amf3GppAccessRegistration'
    '400':
      Reference: 'TS29571_CommonData.yaml#/components/responses/400'
    '403':
      Reference: 'TS29571_CommonData.yaml#/components/responses/403'
    '404':
      Reference: 'TS29571_CommonData.yaml#/components/responses/404'
    '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:
          nudm-uecm: Access to the nudm-uecm API

schemas:
# COMPLEX TYPES:
  Amf3GppAccessRegistration:
    Type: object
    Required:
      - amfInstanceId
      - deregCallbackUri
      - guami
      - ratType
    Properties:
      amfInstanceId:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
      supportedFeatures:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
      purgeFlag:
        Reference: '#/components/schemas/PurgeFlag'
      pei:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
      imsVoPs:
        Reference: '#/components/schemas/ImsVoPs'
      deregCallbackUri:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      amfServiceNameDereg:
        Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
      pcscfRestorationCallbackUri:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      amfServiceNamePcscfRest:
        Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
      initialRegistrationInd:
        Type: boolean
      guami:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
      backupAmfInfo:
        Type: array
```

```
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
      minItems: 1
    drFlag:
      Reference: '#/components/schemas/DualRegistrationFlag'
    ratType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
    urrpIndicator:
      Type: boolean
    amfEeSubscriptionId:
      Type: string
    epsInterworkingInfo:
      Reference: '#/components/schemas/EpsInterworkingInfo'
    ueSrvccCapability:
      Type: boolean
    nid:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Nid'
    registrationTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    vgmlcAddressIpv4:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    vgmlcAddressIpv6:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    vgmlcFqdn:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
Amf3GppAccessRegistrationModification:
  Type: object
  Required:
    - guami
  Properties:
    guami:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    purgeFlag:
      Reference: '#/components/schemas/PurgeFlag'
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    imsVoPs:
      Reference: '#/components/schemas/ImsVoPs'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
    epsInterworkingInfo:
      Reference: '#/components/schemas/EpsInterworkingInfo'
    ueSrvccCapability:
      Type: boolean
      nullable: true
EpsInterworkingInfo:
  Type: object
  Properties:
    epsIwkPgws:
     Description: A map (list of key-value pairs where Dnn serves as key) of EpsIwkPgws
```

```
      Type: object
      additionalProperties:
        Reference: '#/components/schemas/EpsIwkPgw'
EpsIwkPgw:
  Type: object
  Required:
    - pgwFqdn
    - smfInstanceId
  Properties:
    pgwFqdn:
      Type: string
    smfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
AmfNon3GppAccessRegistration:
  Type: object
  Required:
    - amfInstanceId
    - imsVoPs
    - deregCallbackUri
    - guami
    - ratType
  Properties:
    amfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    purgeFlag:
      Reference: '#/components/schemas/PurgeFlag'
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    imsVoPs:
      Reference: '#/components/schemas/ImsVoPs'
    deregCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    amfServiceNameDereg:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
    pcscfRestorationCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    amfServiceNamePcscfRest:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/ServiceName'
    guami:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
      minItems: 1
    ratType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/RatType'
    urrpIndicator:
      Type: boolean
    amfEeSubscriptionId:
```

```
      Type: string
    nid:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Nid'
    registrationTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
    vgmlcAddressIpv4:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
    vgmlcAddressIpv6:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
    vgmlcFqdn:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
AmfNon3GppAccessRegistrationModification:
  Type: object
  Required:
    - guami
  Properties:
    guami:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Guami'
    purgeFlag:
      Reference: '#/components/schemas/PurgeFlag'
    pei:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
    imsVoPs:
      Reference: '#/components/schemas/ImsVoPs'
    backupAmfInfo:
      Type: array
      Items:
        Reference: 'TS29571_CommonData.yaml#/components/schemas/BackupAmfInfo'
SmfRegistration:
  Type: object
  Required:
    - smfInstanceId
    - pduSessionId
    - singleNssai
    - plmnId
  Properties:
    smfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    smfSetId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfSetId'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    pduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    singleNssai:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Snssai'
    dnn:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Dnn'
    emergencyServices:
      Type: boolean
    pcscfRestorationCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
```

```
    plmnId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    pgwFqdn:
      Type: string
    epdgInd:
      Type: boolean
      Default: false
    deregCallbackUri:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Uri'
    registrationReason:
      Reference: '#/components/schemas/RegistrationReason'
    registrationTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
SmsfRegistration:
  Type: object
  Required:
    - smsfInstanceId
    - plmnId
  Properties:
    smsfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
    smsfSetId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfSetId'
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
    plmnId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PlmnId'
    smsfMAPAddress:
      Reference: '#/components/schemas/E164Number'
    smsfDiameterAddress:
      Reference: '#/components/schemas/NetworkNodeDiameterAddress'
    registrationTime:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DateTime'
DeregistrationData:
  Type: object
  Required:
    - deregReason
    - accessType
  Properties:
    deregReason:
      Reference: '#/components/schemas/DeregistrationReason'
    accessType:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/AccessType'
    pduSessionId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/PduSessionId'
    newSmfInstanceId:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/NfInstanceId'
PcscfRestorationNotification:
  Type: object
  Required:
    - supi
  Properties:
```

```
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
NetworkNodeDiameterAddress:
  Type: object
  Required:
    -name
    - realm
  Properties:
    name:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'
    realm:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/DiameterIdentity'
TriggerRequest:
  Type: object
  Required:
    - supi
  Properties:
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
SmfRegistrationInfo:
  Type: object
  Required:
    - smfRegistrationList
  Properties:
    smfRegistrationList:
      Type: array
      Items:
        Reference: '#/components/schemas/SmfRegistration'
      minItems: 1
AmfDeregInfo:
  Type: object
  Required:
    - deregReason
  Properties:
    deregReason:
      Reference: '#/components/schemas/DeregistrationReason'
LocationInfo:
  Type: object
  Required:
    - registrationLocationInfoList
  Properties:
    supi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Supi'
    gpsi:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/Gpsi'
    registrationLocationInfoList:
      Type: array
      Items:
        Reference: '#/components/schemas/RegistrationLocationInfo'
      minItems: 1
      maxItems: 2
    supportedFeatures:
      Reference: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
```

```
    RegistrationLocationInfo:
      Type: object
    CmInfoReport:
      Type: object
      Required:
        - newCmInfoList
      Properties:
        oldCmInfoList:
          Type: array
          Items:
            Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/CmInfo'
          minItems: 1
          maxItems: 2
        newCmInfoList:
          Type: array
          Items:
            Reference: 'TS29518_Namf_EventExposure.yaml#/components/schemas/CmInfo'
          minItems: 1
          maxItems: 2
    VgmlcAddress:
      Type: object
      Properties:
        vgmlcAddressIpv4:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv4Addr'
        vgmlcAddressIpv6:
            Reference: 'TS29571_CommonData.yaml#/components/schemas/Ipv6Addr'
        vgmlcFqdn:
            Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
    PeiUpdateInfo:
      Type: object
      Required:
        - pei
      Properties:
        pei:
          Reference: 'TS29571_CommonData.yaml#/components/schemas/Pei'
  # SIMPLE TYPES:
    PurgeFlag:
      Type: boolean
    E164Number:
      Type: string
      Pattern: '^[0-9]{1,15}$'
    DualRegistrationFlag:
      Type: boolean
  # ENUMS:
    ImsVoPs:
      anyOf:
        - type: string
          enum:
          - HOMOGENEOUS_SUPPORT
          - HOMOGENEOUS_NON_SUPPORT
          - NON_HOMOGENEOUS_OR_UNKNOWN
        - type: string
    DeregistrationReason:
```

```
    anyOf:
      - type: string
        enum:
        - UE_INITIAL_REGISTRATION
        - UE_REGISTRATION_AREA_CHANGE
        - SUBSCRIPTION_WITHDRAWN
        - 5GS_TO_EPS_MOBILITY
        - 5GS_TO_EPS_MOBILITY_UE_INITIAL_REGISTRATION
        - REREGISTRATION_REQUIRED
        - SMF_CONTEXT_TRANSFERRED
      - type: string
  RegistrationReason:
    anyOf:
      - type: string
        enum:
        - SMF_CONTEXT_TRANSFERRED
      - type: string
```

External Docs

```
Description: 3GPP TS 29.503 Unified Data Management Services, version 16.3.0
URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.503/'
```