



# Handshake

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## OpenAPI

OpenAPI Version: 3.0.0

## Info

**Version:** '1.0.0'  
**Title:** 'N32 Handshake API'  
**Description:** 'N32-c Handshake'

## Servers

**URL:** '{apiRoot}/n32c-handshake/v1'

**Variables:**

**API Root:**

**Default:** https://example.com

**Description:** apiRoot as defined in subclause 4.4 of 3GPP TS 29.501.

# Paths

## /exchange-capability

**Method:** Post

**Summary:** Security Capability Negotiation

**Tags:**

- Security Capability Negotiation

**Operation ID:** PostExchangeCapability

**Request Body:**

**Description:** Custom operation for security capability negotiation

**Required/Optional:** true

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/SecNegotiateReqData'

**Responses:**

'200':

**Description:** OK (Successful negotiation of security capabilities)

**Content:**

**Application/JSON:**

**Schema:**

**Reference:** '#/components/schemas/SecNegotiateRspData'

'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

## /exchange-params

**Method:** Post

**Summary:** Parameter Exchange

**Tags:**

- Parameter Exchange

**Operation ID:** PostExchangeParams**Request Body:****Description:** Custom operation for parameter exchange**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SecParamExchReqData'**Responses:****'200':****Description:** OK (Successful exchange of parameters)**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/SecParamExchRspData'**'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

## /n32f-terminate

**Method:** Post**Summary:** N32-f Context Terminate**Tags:**

- N32-f Context Terminate

**Operation ID:** PostN32fTerminate**Request Body:****Description:** Custom operation for n32-f context termination**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/N32fContextInfo'

**Responses:**

'200':  
**Description:** OK (Successful exchange of parameters)  
**Content:**  
**Application/JSON:**  
**Schema:**  
**Reference:** '#/components/schemas/N32fContextInfo'

'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

## /n32f-error

**Method:** Post**Summary:** N32-f Error Reporting Procedure**Tags:**

- N32-f Error Report

**Operation ID:** PostN32fError**Request Body:****Description:** Custom operation for n32-f error reporting procedure**Required/Optional:** true**Content:****Application/JSON:****Schema:****Reference:** '#/components/schemas/N32fErrorInfo'**Responses:**

'204':  
**Description:** successful error reporting

'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

```

schemas:
  SecurityCapability:
    anyOf:
      - type: string
        enum:
          - TLS
          - ALS
      - type: string
  ApiSignature:
    oneOf:
      - $ref: 'TS29571_CommonData.yaml#/components/schemas/Uri'
      - $ref: '#/components/schemas/CallbackName'
  HttpMethod:
    anyOf:
      - type: string
        enum:
          - GET
          - PUT
          - POST
          - DELETE
          - PATCH
          - HEAD
          - OPTIONS
          - CONNECT
          - TRACE
      - type: string
  IeType:
    anyOf:
      - type: string
        enum:
          - UEID
          - LOCATION
          - KEY_MATERIAL
          - AUTHENTICATION_MATERIAL
          - AUTHORIZATION_TOKEN
          - OTHER
          - NONSENSITIVE
      - type: string
  IeLocation:
    anyOf:
      - type: string
        enum:
          - URI_PARAM

```

```

- HEADER
- BODY
- MULTIPART_BINARY
- type: string
IeInfo:
  Type: object
  Required:
  - ieLoc
  - ieType
  Properties:
    ieLoc:
      Reference: '#/components/schemas/IeLocation'
    ieType:
      Reference: '#/components/schemas/IeType'
    reqIe:
      Type: string
    rspIe:
      Type: string
    isModifiable:
      Type: boolean
ApiIeMapping:
  Type: object
  Required:
  - apiSignature
  - apiMethod
  - IeList
  Properties:
    apiSignature:
      Reference: '#/components/schemas/ApiSignature'
    apiMethod:
      Reference: '#/components/schemas/HttpMethod'
    IeList:
      Type: array
      Items:
        Reference: '#/components/schemas/IeInfo'
      minItems: 1
ProtectionPolicy:
  Type: object
  Required:
  - apiIeMappingList
  Properties:
    apiIeMappingList:
      Type: array
      Items:
        Reference: '#/components/schemas/ApiIeMapping'
      minItems: 1
    dataTypeEncPolicy:
      Type: array
      Items:
        Reference: '#/components/schemas/IeType'
      minItems: 1
SecNegotiateReqData:
  Type: object

```

```

Required:
  - sender
  - supportedSecCapabilityList
Properties:
  sender:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
  supportedSecCapabilityList:
    Type: array
    Items:
      Reference: '#/components/schemas/SecurityCapability'
    minItems: 1
SecNegotiateRspData:
  Type: object
  Required:
  - sender
  - selectedSecCapability
  Properties:
  sender:
    Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
  selectedSecCapability:
    Reference: '#/components/schemas/SecurityCapability'
SecParamExchReqData:
  Type: object
  Required:
  - n32fContextId
  Properties:
  n32fContextId:
    Type: string
  jweCipherSuiteList:
    Type: array
    Items:
      Type: string
    minItems: 1
  jwsCipherSuiteList:
    Type: array
    Items:
      Type: string
    minItems: 1
  protectionPolicyInfo:
    Reference: '#/components/schemas/ProtectionPolicy'
SecParamExchRspData:
  Type: object
  Required:
  - n32fContextId
  Properties:
  n32fContextId:
    Type: string
  selectedJweCipherSuite:
    Type: string
  selectedJwsCipherSuite:
    Type: string
  selProtectionPolicyInfo:
    Reference: '#/components/schemas/ProtectionPolicy'

```

```
N32fContextInfo:
  Type: object
  Required:
    - n32fContextId
  Properties:
    n32fContextId:
      Type: string
CallbackName:
  Type: object
  Required:
    - callbackType
  Properties:
    callbackType:
      Type: string
N32fErrorInfo:
  Type: object
  Required:
    - n32fMessageId
    - n32fErrorType
  Properties:
    n32fMessageId:
      Type: string
    n32fErrorType:
      Reference: '#/components/schemas/N32fErrorType'
    failedModificationList:
      Type: array
      Items:
        Reference: '#/components/schemas/FailedModificationInfo'
      minItems: 1
    errorDetailsList:
      Type: array
      Items:
        Reference: '#/components/schemas/N32fErrorDetail'
      minItems: 1
FailedModificationInfo:
  Type: object
  Required:
    - ipxId
    - n32fErrorType
  Properties:
    ipxId:
      Reference: 'TS29510_Nnrf_NFManagement.yaml#/components/schemas/Fqdn'
    n32fErrorType:
      Reference: '#/components/schemas/N32fErrorType'
N32fErrorDetail:
  Type: object
  Required:
    - attribute
    - msgReconstructFailReason
  Properties:
    attribute:
      Type: string
    msgReconstructFailReason:
```



```
Reference: '#/components/schemas/FailureReason'
N32fErrorType:
  anyOf:
    - type: string
    enum:
      - INTEGRITY_CHECK_FAILED
      - INTEGRITY_CHECK_ON_MODIFICATIONS_FAILED
      - MODIFICATIONS_INSTRUCTIONS_FAILED
      - DECIPHERING_FAILED
      - MESSAGE_RECONSTRUCTION_FAILED
    - type: string
FailureReason:
  anyOf:
    - type: string
    enum:
      - INVALID_JSON_POINTER
      - INVALID_INDEX_TO_ENCRYPTED_BLOCK
      - INVALID_HTTP_HEADER
    - type: string
```

## External Docs

**Description:** 3GPP TS 29.573 V15.1.0; 5G System; Public Land Mobile Network (PLMN) Interconnection; Stage 3

**URL:** [http://www.3gpp.org/ftp/Specs/archive/29\\_series/29.573/](http://www.3gpp.org/ftp/Specs/archive/29_series/29.573/)

