

TELIA OPERATOR SERVICE PLATFORM

OMA Authorization REST API Guide

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Revision: 6.1

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Revision History

Revision History

Revision Number	Description	Revision Date
1.0	Initial release for Release 3.	September 2015
2.0	Applied template and changed legal and copy right information from the PDF shared by Ray.	November 26 2015
2.1	Changed Accelerite Corporation to Aepona Limited	December 7, 2015
3.0	Language review	February 3, 2016
3.1	Incorporated dev review comments related to parameter value and service exceptions	February 25, 2016
4.0	Incorporated review comments received from TS about document reference	May 2, 2016
4.1	Incorporated the review comments received from TS about the misleading information of develop the OAuth2 mechanism	May 12, 2016
4.2	Making changes for ASFTS-74	May 25, 2016
4.3	Making changes for the updates related to ASFTS-74	May 31, 2016
4.4	ASFTS-74	June 3. 2016
4.5	ASFTS-99	June 6, 2016
4.6	ASFTS-99	June 8, 2016
4.7	ASFTS-116, ASFTS-117, and ASFTS-92	June 13, 2016
4.8	ASFTS-117, ASFTS 123	June 15, 2016
5.0	Final release	June 16, 2016
5.1	Header changes	Jan 31, 2017
5.2	Header changes	March 3, 2017
5.2	Header changes	March 9, 2017
6.0	CR0018	March 29, 2017
6.1	Copyright Year updated to 2020	February 14, 2020
6.1	Copyright Year updated to 2022	May 20, 2022

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1 OMA Authorization REST Overview

The Telia-OMA Authorization RESTful interface allows an application to obtain or revoke an Access Token from the Autho4API Authorization Server in the Operator Service platform. You need the access token to add in the header of all subsequent API calls from the application to the platform. See Appendix [A](#) for an example of usage.

The API is implemented based on the following OMA Authorization Framework specifications, with limitations.

- *OMA-ER-Autho4API-V1_0-20131120-C*

1.1 Methods - Scope of this Document

This issue of the API Guide contains descriptions of the following Authorization resources:

- Request Access Token – request and receive an access token from the authorization server
- Revoke Access Token – request revocation of a previously obtained token

Restrictions which apply to certain elements are described in section [2.2](#).

1.2 Authentication

OSP supports one-way, server-side SSL, enabling HTTPS access sessions with a server-side certificate loaded on OSP. It does not support two-way SSL.

Basic authentication is required for an application, using client credentials provided by OSP, as defined in HTTP RFC No. 1945, section 11 at

<http://tools.ietf.org/html/rfc1945>.

You do not need any other authentication when calling the OMA Authorization API.

NOTE: Operator Service Platform API's support chunked transfer coding (Resource ref: HTTP 1.1 specification: <ftp://ftp.isi.edu/in-notes/rfc2616.txt>) in line with HTTP 1.1 protocol.

1.3 Sandbox and Production Use

The token obtained through the resources listed in this document is used for services in sandbox mode as well as in production. There is no special resource or token for sandbox use.

2 Resource Summary

2.1 URI and Operations List

The URIs of the resources are as follows:

- Request Access Token - section [3.1](#)
POST <https://api.opaali.telia.fi/autho4api/v1/token>
- Revoke Access Token - section [3.2](#)
POST <https://api.opaali.telia.fi/autho4api/v1/revoke>

2.2 Restrictions

The following restrictions apply to Telia-OMA Authorization API:

Table 1 Restrictions

Parameter/element	Restriction
Grant Type	Supports only the <i>Confidential Client</i> Grant type. Any other value fails and returns an error.
Scope Values	Does not support scope values

2.3 Format Requirement

The Telia-OMA Authorization API supports JSON content types only.

3 Access Token Methods

3.1 Request Access Token

The POST operation allows you to obtain an Access Token which is needed in all API calls to the Operator Service platform for authentication and authorization.

POST <https://api.opaali.telia.fi/autho4API/v1/token>

3.1.1 Request

```
POST
https://api.opaali.telia.fi/autho4api/v1/token
Host:api.opaali.telia.fi
Connection: keep-alive
Content-Type: application/x-www-form-urlencoded
Content-Length: 29
Authorization: Basic c21zQXBwNGE6MXFhejJ3c3g=
grant_type=client_credentials
```

NOTE: Use the base64 (user name and password) method to generate Authentication and Authorization headers. These credentials are partner-specific and application-specific and appear in the **Manage Endpoints** page for a partner of the Opaali Portal.

Example for Curl-tool command:

```
curl -v -k -d grant_type=client_credentials
https://api.opaali.telia.fi/autho4api/v1/token --header
"Content-Type:application/x-www-form-urlencoded" --header
"Authorization: Basic
ZmM3ZDQ1MjBmNjBiYmJlOTk5ZTdjZjEyNjgwYzIzODk6YyVub10xTzw="
```

3.1.2 Request Parameters

Table 2 Request Parameters (token)

Parameter	Data Type	Description	Optional
grant_type	string	Authorization grant type. Must be client_credentials. Any other value fails and returns an error, as shown in section 4.1 .	No

Access Token Methods

3.1.3 Response

```
HTTP/1.1 200 OK
Accept: application/json; charset=UTF-8
Authorization: Basic c2lzQXBwNGE6MXFhejJ3c3g=
Cache-Control: no-store
Content-Type: application/json; charset=UTF-8
Date: Tue, 07 Jul 2015 03:39:47 GMT
Pragma: no-cache
Content-Length: 110
Server: Operator Service Platform
{ "access_token" : "c596eb5c-1829-4aa6-8f09-bbdd49c3fe26",
  "token_type" : "bearer", "expires_in" : 599 }
```

3.1.4 Response Parameters

Table 3 Response Parameters (token)

Parameter	Data Type	Description	Optional
access_token	string	The unique access token generated by the server.	No
token_type	string	The only supported type is 'bearer'.	No
expires_in	Integer (seconds)	The expiration period for tokens. The access token expires in 600 sec.	No

3.2 Revoke Access Token

The POST operation revokes a previously obtained token:

POST <https://api.opaali.telia.fi/autho4API/v1/revoke>

3.2.1 Request

Example request:

```
POST
https://api.opaali.telia.fi/autho4api/v1/revoke
Host:api.opaali.telia.fi
Connection: keep-alive
Content-Type: application/x-www-form-urlencoded
Content-Length: 29
Authorization: Basic c2lzQXBwNGE6MXFhejJ3c3g=
```

Access Token Methods

```
token=3e7f56ec-91d6-4d93-80de-fac2c0cfe5f7
```

3.2.2 Request Parameters

Table 4 Request Parameters (revoke)

Parameter	Data Type	Description	Optional
token	string	The token you wish to have revoked.	No

3.2.3 Response

Response example:

```
HTTP/1.1 200 OK
Accept: application/json; charset=UTF-8
Authorization: Bearer c21zQXBwNGE6MXFhejJ3c3g=
Content-Length: 0
Content-Type: application/json; charset=UTF-8
Date: Tue, 07 Jul 2015 04:48:28 GMT
Server: Operator Service Platform
```

The API returns the HTTP status code 200, if the token has been revoked successfully or if the client submitted an invalid token. The client ignores the content of the response body as all the necessary information is conveyed in the response code.

NOTE: Invalid tokens do not create an error response because the client cannot handle such an error in a reasonable way. Moreover, the purpose of the revocation request, invalidating the particular token, is already achieved.

4 Response Codes and Exceptions

4.1 Response Codes

HTTP response codes are used to indicate:

200 – Success!

400 – Bad Request.

- For an invalid access token request, an exception returns with the text *error: invalid_request*.
- For an unsupported grant type in the access token request (not as *client_credentials*), an exception returns with the text *error: unsupported_grant_type*:

```
HTTP/1.1 400 Bad Request
Content-Type: application/json
Date: Tue, 07 Jul 2015 05:12:14 GMT
Content-Length: 40
Server: Operator Service Platform
{ "error" : "unsupported_grant_type" }
```

401 – Authentication failure, check your authentication details.

For more details, refer to <http://www.ietf.org/rfc/rfc2616.txt>.

4.1.1 Policy Exceptions

A policy exception means that the request syntax is valid, but Operator Service platform does not support it.

POL30xx – Operator Service platform specific service policy error occurred; HTTP response code 403

Table 5 Policy Exceptions

Error Code	Error Text/ Action Required
POL3003: Max transactions per interval is enforced, and you have made more requests.	The following policy error occurred: Maximum Transactions per Interval Exceeded. Error code is 3003.

Response Codes and Exceptions

	Check your SLA for the maximum transaction rate allowed, such as 10 TPS. Ensure that the rate of your requests is within the limits.
POL3004: Max transactions is enforced, and max requests has been exceeded	The following policy error occurred: Maximum Transactions Exceeded. Error code is 3004. Check your SLA for the maximum transactions allowed,

Response Codes and Exceptions

A Access Token Use Examples

The examples below show the use of the access token in API calls.

To invoke on the Messaging or Payment APIs using an access token, an application must use the Authorization request header field with the Bearer authorization scheme.

Example Messaging API request for `inboundMessageRetrieveAndDeleteRequest` with bearer authorization scheme:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/
registrations/822c82991bd145e493a3690e871800e2/messages/retr
ieveAndDeleteMessages
Host:api.opaali.telia.fi
Connection: close
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-type: application/json
Content-Length: 29
Accept: application/json

{"inboundMessageRetrieveAndDeleteRequest":{
  "retrievalOrder":"OldestFirst",
  "useAttachmentURLs":"true"}
}
```

Example Messaging API response for `inboundMessageRetrieveAndDeleteRequest` with bearer authorization scheme:

```
HTTP/1.1 200 OK
Date: Tue, 14 Apr 2015 07:36:40 GMT
Server: Operator Service Platform
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-Type: application/json
RegistrationId: 822c8299-1bd1-45e4-93a3-690e871800e2
Connection: close
Transfer-Encoding: chunked

HTTPSampleResult fields:
ContentType: application/json
DataEncoding: null
```

Response Codes and Exceptions

```
{
  "inboundMessageList" : {
    "inboundMessage" : [ {
      "destinationAddress" : "70200",
      "senderAddress" : "tel:+35842347002",
      "dateTime" : "2015-04-14T07:35:31.000+0000",
      "resourceURL" :
      "https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDeleteMessages/4883911",
      "messageId" : "4883911",
      "inboundSMSTextMessage" : {
        "message" : "Nokeyword FN-REC-ONLY-02 - Autoframing"
      }
    }, {
      "destinationAddress" : "70200",
      "senderAddress" : "tel:+35842347002",
      "dateTime" : "2015-04-14T07:36:31.000+0000",
      "resourceURL" :
      "https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDeleteMessages/4883912",
      "messageId" : "4883912",
      "inboundSMSTextMessage" : {
        "message" : "Nokeyword FN-REC-ONLY-02 - Autoframing"
      }
    } ],
    "totalNumberOfPendingMessages" : 0,
    "numberOfMessagesInThisBatch" : 2,
    "resourceURL" :
    "https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDeleteMessages"
  }
}
```

Example Payment API request with bearer authorization scheme:

```
POST
https://api.opaali.telia.fi/production/payment/v1/tel:+358369102/transactions/amount
HTTP 1.1
Host:api.opaali.telia.fi
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
```

Response Codes and Exceptions

```
Accept: application/json
Content-Type: application/json
Content-Length: 29
{
  "amountTransaction": {
    "clientCorrelator": "10000",
    "endUserId": "tel:+358369102",
    "paymentAmount": {
      "chargingInformation": {
        "amount": 8.99,
        "code": "TEST-012345",
        "currency": "EUR",
        "description": ["Default description"]
      }
    },
    "referenceCode": "REF-12345",
    "transactionOperationStatus": "Charged"
  }
}
```

Example Payment API response with bearer authorization scheme:

```
HTTP/1.1 201 Created
accept: application/json
accept-encoding: gzip, deflate
authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
content-type: application/json
date: Mon, 06 Jun 2016 11:57:46 GMT
location:
https://api.opaali.telia.fi/production/payment/v1/tel%3A%2B9
12890369102/transactions/amount/79530069-0ff0-45cc-8575-
7cf819f9c4a7
user-agent: Apache-HttpClient/4.1.1 (java 1.5)
server: Operator Service Platform
Content-Length: 952
{
  "amountTransaction": {
    "endUserId": "tel:+358369102",
    "paymentAmount": {
      "chargingInformation": {
        "description": [
          "Default description"
        ],
        "currency": "EUR",
```

Response Codes and Exceptions

```
        "amount": 8.99,  
        "code": "TEST-012345"  
    },  
    "totalAmountCharged": 8.99  
},  
"transactionOperationStatus": "Charged",  
"referenceCode": "REF-12345",  
"clientCorrelator": "10000",  
"resourceURL":  
"https://api.opaali.telia.fi/production/payment/v1/tel%3A%2B  
912890369102/transactions/amount/79530069-0ff0-45cc-8575-  
7cf819f9c4a7"  
}  
}
```

Example of request when sending OutboundMessageRequest to messaging API with bearer authorization scheme

```
POST  
https://api.opaali.telia.fi/production/messaging/v1/outbound  
/15590/requests HTTP/1.1  
Host:api.opaali.telia.fi  
Content-Type: application/json  
Content-Length: 29  
Accept: application/json  
Authorization: Bearer 378bb724-61db-4186-bb67-3966b9259cc4  
{  
  "outboundMessageRequest": {  
    "address": ["tel:+358405767255"],  
    "outboundSMSTextMessage": {"message": "send sms message"},  
    "senderName" : "Telia",  
    "senderAddress" : "15590",  
    "receiptRequest": {  
      "notifyURL": "",  
      "notificationFormat": "JSON"  
    }  
  }  
}
```

Example of response when sending OutboundMessageRequest to messaging API with bearer authorization scheme

```
HTTP/1.1 201 Created  
accept-encoding: gzip, deflate  
authorization: Bearer 378bb724-61db-4186-bb67-3966b9259cc4  
content-type: application/json  
date: Tue, 31 May 2016 04:53:35 GMT
```


Response Codes and Exceptions

```
location:
https://api.opaali.telia.fi/production/messaging/v1/outbound
/15590/requests/43799df0-c205-4b06-9e2b-c8cdc0f4b491
user-agent: Apache-HttpClient/4.1.1 (java 1.5)
server: Operator Service Platform
Content-Length: 166

{
  "resourceReference" : {
    "resourceURL" :
    "https://api.opaali.telia.fi/production/messaging/v1/outbound/15590/requests/43799df0-c205-4b06-9e2b-c8cdc0f4b491"
  }
}
```