

# ETV Inside SOAP

## User Documentation

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## I. Table of contents

I.	TABLE OF CONTENTS.....	II
II.	LIST OF ABBREVIATIONS.....	III
<b>1</b>	<b>INTRODUCTION .....</b>	<b>4</b>
<b>2</b>	<b>AUTHENTICATION.....</b>	<b>5</b>
2.1	OPEN USER ACCOUNT .....	5
2.2	OPEN AUTHENTICATION.....	5
2.2.1	<i>Access Points Login</i> .....	6
2.2.2	<i>WSDL Authentication</i> .....	7
<b>3</b>	<b>SOAP SEARCH SERVICE.....</b>	<b>8</b>
3.1	ACCESS POINTS SEARCH SERVICE.....	8
3.2	WSDL SEARCH SERVICE.....	8
3.3	FUNCTIONALITIES SEARCH SERVICE.....	8
3.3.1	<i>SearchLight</i> .....	9
3.3.2	<i>LookupLight</i> .....	12
3.3.3	<i>GetAddressLight</i> .....	12
<b>4</b>	<b>ERROR CODE LIST .....</b>	<b>13</b>
<b>5</b>	<b>INFORMATIONS-CODE LIST .....</b>	<b>15</b>
<b>6</b>	<b>SUPPORT.....</b>	<b>16</b>
<b>7</b>	<b>LIST OF FIGURES .....</b>	<b>17</b>
<b>8</b>	<b>LIST OF TABLES .....</b>	<b>18</b>

## II. List of abbreviations

API	Application Programming Interface
CORS	Cross-Origin Resource Sharing
ETV	Electronic telephone directory
HTTPS	Hypertext Transfer Protocol Secure
OAuth 2.0	Open Authentication Version 2
LV03	National survey
SOAP	Single Object Access Protocol
TLS	Transport Layer Security
URL	Uniform Resource Locator
WCF	Windows Communication Foundation
WSDL	Web Service Description Language

# 1 Introduction

ETV Inside Webservices offers professional access to the daily updated directory data of Swisscom Directories AG within the scope of VoIP telephony.

All ETV Inside functionalities are available both as RESTful and WCF SOAP web services. This documentation describes the SOAP Webservices.

## 2 Authentication

Opening an OAuth2 user account is a prerequisite for using the ETV Inside APIs. The user account (e-mail address/password) is required for logging in to the Open Authentication Server and for the technical invocation of the APIs in the production and integration environments. The user account is valid for both environments.

### 2.1 Open user account

The following is the procedure for creating an account:

- a. Call up the website <https://api.multisource.ch/admin>
- b. Open an account (register with an e-mail address)
- c. Activate your account via the mail sent to you
- d. Call up user profile via URL <https://auth.local.ch/secure/me>



Figure 1: OAuth User Profile with «Identification» and «Username»

- e. Report the information «username» (email address of the OAuth account) and «Identification» to [etv@directoriesdata.ch](mailto:etv@directoriesdata.ch) for activation

Afterwards directoriesDATA will activate the account and inform you via e-mail.

### 2.2 Open Authentication

The ETV Inside Search Services are accessed via the Open Authentication Server from localsearch.

By submitting a request to the OAuth server, you will receive a valid 'Access Token' for access to ETV Inside functionality. The following figure shows the process for obtaining a valid access token.

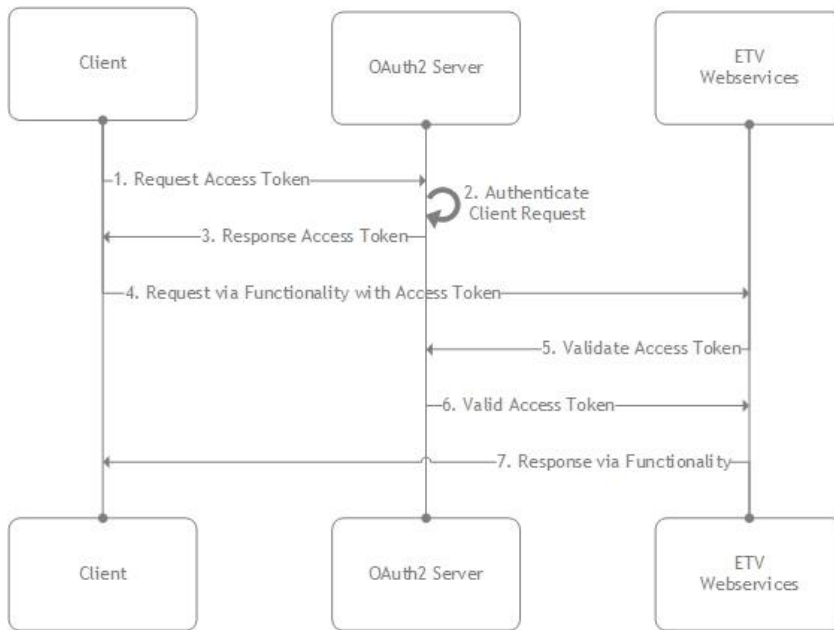


Figure 2: Open Authentication Process

### 2.2.1 Access Points Login

The following are the access points for obtaining a valid Access Token.

Table 1: Access points for authentication

Access points	Description	Method
<a href="https://apitep.multisource.ch/soap/Services/AuthenticationService.svc">https://apitep.multisource.ch/soap/Services/AuthenticationService.svc</a>	Integration	POST
<a href="https://api.multisource.ch/soap/Services/AuthenticationService.svc">https://api.multisource.ch/soap/Services/AuthenticationService.svc</a>	Production	POST

Binding: basicHttpBinding

Security Mode: Transport clientCredentialType=None

Table 2: Reference Access Token

Function	Description	Code Example	XML
Access-Token	Obtaining Access Token	<pre> AuthenticationClient _Auth = new AuthenticationClient();  string _Token = _Auth.AccessToken("xxx", "xxx");  Console.WriteLine(string.Format("Token: {0}", _Token));  _Auth.Close();                     </pre>	<pre> &lt;s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"&gt;&lt;s:Body&gt;&lt;AccessToken xmlns="https://api.multisource.ch/soap"&gt; &lt;Username&gt;ENTER USER&lt;/Username&gt; &lt;Password&gt;ENTER PASSWORD&lt;/Password&gt; &lt;/AccessToken&gt;&lt;/s:Body&gt;&lt;/s:Envelope&gt;                     </pre>

The parameter values marked in red must be replaced with the e-mail address and password of the previously created oAuth2 user account (see chapter 2.1).

If the API is integrated via JavaScript, the request domain must be stored as a valid access domain (CORS).

You will receive a valid Access Token as a response.

**Table 3: Response Token Query**

XML	Description
<pre>&lt;s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;s:Body&gt;     &lt;AccessTokenResponse xmlns="http://tempuri.org/"&gt;       &lt;AccessTokenResult&gt;253ab17e-fee-4882-8518-09076862736a&lt;/AccessTokenResult&gt;     &lt;/AccessTokenResponse&gt;   &lt;/s:Body&gt; &lt;/s:Envelope&gt;</pre>	<p>The Access Token is valid for 6 hours. The validity of the token is extended by 6 hours if it is used in the last 60 minutes before the expiry time.</p>

## 2.2.2 WSDL Authentication

Following are the access points for obtaining the Authentication Service description:

**Table 4: WSDL ETV Authentication**

WSDL	Description
svcutil.exe <a href="https://apitep.multisource.ch/soap/Services/AuthenticationService.svc?wsdl">https://apitep.multisource.ch/soap/Services/AuthenticationService.svc?wsdl</a>	Service description from <b>Client Integration</b>
<a href="https://apitep.multisource.ch/soap/Services/AuthenticationService.svc?singleWsdL">https://apitep.multisource.ch/soap/Services/AuthenticationService.svc?singleWsdL</a>	Service description from <b>Single File Integration</b>
svcutil.exe <a href="https://api.multisource.ch/soap/Services/AuthenticationService.svc?wsdl">https://api.multisource.ch/soap/Services/AuthenticationService.svc?wsdl</a>	Service description from <b>client production</b>
<a href="https://api.multisource.ch/soap/Services/AuthenticationService.svc?singleWsdL">https://api.multisource.ch/soap/Services/AuthenticationService.svc?singleWsdL</a>	Service description from <b>single file production</b>

## 3 SOAP Search Service

All ETV Inside functionalities are available via a SOAP web service.

### 3.1 Access Points Search Service

The ETV Inside Search Service is available from the following access points:

Table 5: Search Service Access Points

Access points	Description	Method
<a href="https://apitep.multisource.ch/soap/Services/ETVSearchService.svc">https://apitep.multisource.ch/soap/Services/ETVSearchService.svc</a>	Integration	POST
<a href="https://api.multisource.ch/soap/Services/ETVSearchService.svc">https://api.multisource.ch/soap/Services/ETVSearchService.svc</a>	Production	POST

Access is only possible via https (TLS 1.3). The downgrading of TLS is not allowed. The number of queries per functionality is limited in the **integration** to **100 transactions** per day.

### 3.2 WSDL Search Service

Below are the access points for obtaining the web service descriptions:

Table 6: WSDL ETV Search Service

WSDL	Description
svcutil.exe <a href="https://apitep.multisource.ch/soap/Services/ETVSearchService.svc?wsdl">https://apitep.multisource.ch/soap/Services/ETVSearchService.svc?wsdl</a>	Service description from Client <b>Integration</b>
<a href="https://apitep.multisource.ch/soap/Services/ETVSearchService.svc?singleWsd">https://apitep.multisource.ch/soap/Services/ETVSearchService.svc?singleWsd</a>	Service description from Single File <b>Integration</b>
svcutil.exe <a href="https://api.multisource.ch/soap/Services/ETVSearchService.svc?wsdl">https://api.multisource.ch/soap/Services/ETVSearchService.svc?wsdl</a>	Service description from client <b>production</b>
<a href="https://api.multisource.ch/soap/Services/ETVSearchService.svc?singleWsd">https://api.multisource.ch/soap/Services/ETVSearchService.svc?singleWsd</a>	Service description from single file <b>production</b>

### 3.3 Functionalities Search Service

The following API functionalities are available for ETV Inside for queries on the published entry data in the telephone book:



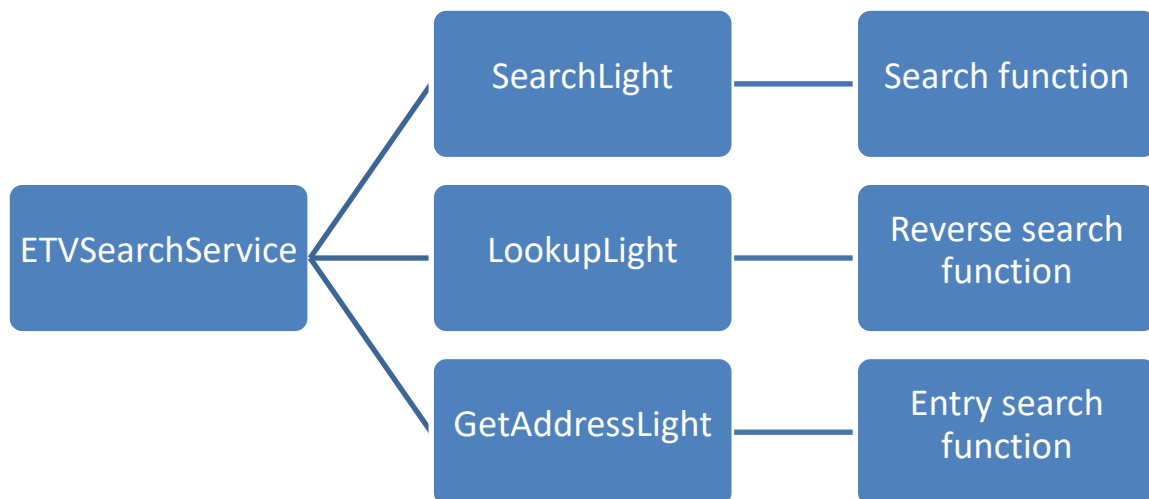


Figure 3: Overview ETV Inside Search Service functionalities

The ETV Inside Search Service functionalities are optimized for different use cases in terms of performance. The functionalities have to be used according to the intended use.

The following functionalities are available in production and integration:

Table 7: Functionalities ETV Search Service

Functionality	Description
SearchLight	Search function for obtaining the ETV entry data
LookupLight	Obtaining the ETV entry data via the "value" object
GetAddressLight	Obtaining the ETV entry data via the "EntryId" object

### 3.3.1 SearchLight

The functionality SearchLight is used to search the record data database. The following table lists all objects that can be used for SearchLight queries.

Table 8: SearchLight objects

Objects	Example	Description
firstname		first name
lastname	localsearch	Last name / Company name
femalename		Ledignames
street	Förrlibuckstrasse	Street name
houseNo	62	House number
zip	8005	Zip code Location
location	Zurich	Place

stateCode	ZH	Canton
typeCode	BUS	Search restriction according to private (RES) or business (BUS) entries.
service	0800 86 80 86	Fixnet/mobile numbers, e-mail, URL
profession		Profession

With the following parameters the Search-Type can be defined individually for each object. On the system side, the search type "Fix-Match" is defined as standard.

**Important note:** The search types 1 and 2 can influence the response times of the functionality and the effectiveness of the search results.

Table 9: Parameter Search-Type

Objects	Example	Description
firstnameSearchType	1	0 = Fix-Match Search (Standard) 1 = Like Search 2 = Phonetic Search 3 = Fix-Match Search
lastnameSearchType		
streetSearchType		
zipSearchType		
locationSearchType		
professionSearchType		

The following parameter can be used to individually limit the amount of results returned by the functionality. The system default is a result set of 50 entries. The maximum allowed result set is 200 entries.

Table 10: Parameter Result set restriction

Objects	Example	Description
maxResultCount	70	In this example, the functionality returns a maximum of 70 entries.

With the following parameters the Precision-Group-Type can be defined individually per object. The Precision-Group-Type enables the search for an input value in several database fields.

**Important note:** The system default is Precision Group Type 0. Precision Group Type 1 may affect the response times of the functionality and the effectiveness of the search results.

Table 11: Parameter Precision-Group-Type

Objects	Value	Description
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firstnamePg	0	Search input in field: <ul style="list-style-type: none"> <li>• firstname</li> </ul>
	1	Search input in fields: <ul style="list-style-type: none"> <li>• firstname</li> <li>• lastname</li> <li>• femalename</li> <li>• category</li> </ul>
lastnamePg	0	Search input in field: <ul style="list-style-type: none"> <li>• lastname</li> </ul>
	1	Search input in fields: <ul style="list-style-type: none"> <li>• firstname</li> <li>• lastname</li> <li>• femalename</li> <li>• category</li> </ul>
femalenamePg	0	Search input in field: <ul style="list-style-type: none"> <li>• femalename</li> </ul>
	1	Search input in fields: <ul style="list-style-type: none"> <li>• firstname</li> <li>• lastname</li> <li>• femalename</li> <li>• category</li> </ul>
categoryPg	0	Search input in field: <ul style="list-style-type: none"> <li>• category</li> </ul>
	1	Search input in fields: <ul style="list-style-type: none"> <li>• firstname</li> <li>• lastname</li> <li>• femalename</li> <li>• category</li> </ul>
professionPg	0	Search input in field: <ul style="list-style-type: none"> <li>• profession</li> </ul>
	1	Search input in fields: <ul style="list-style-type: none"> <li>• profession</li> <li>• category</li> </ul>

Below is a code example for calling the Search Light function.

**Table 12: Example Code Search Light Function**

Example code search function
<pre> ETVSearchClient _Etv = new ETVSearchClient(); var _ReturnSearch = _Etv.SearchLight(_Token, new EntryAdd() { Lastname = "Swisscom Directories AG", Street = "Förrtibuckstrasse", Zip = "8005", Location = "Zürich"}); Console.WriteLine(string.Format("IsError: {0} ErrorCode: {1} ErrorText: {2}", _ReturnSearch.IsError, _ReturnSearch.ErrorCode, _ReturnSearch.ErrorText)); _ReturnSearch.Data.ForEach(f =&gt; f.EtvRecords.ForEach(q =&gt; q.EntryAdds.ForEach(e =&gt; { Console.WriteLine(string.Format("Firstname: {0} Lastname: {1} Street: {2} Zip: {3} Location: {4}", e.Firstname, e.Lastname, e.Street, e.Zip, e.Location)); }))); ETVSearchClient .Close();                     </pre>

### 3.3.2 LookupLight

The LookupLight functionality is used to break down fixnet and mobile numbers and thus display the corresponding entry information. The following table lists all objects that can be used in LookupLight queries.

**Table 13: LookupLight objects**

Objects	Description	Examples	mandatory fields
value	Fixnet/mobile numbers	0800 00 00 24	Yes

### 3.3.3 GetAddressLight

The GetAddressLight functionality is used to search for specific entries based on the entry identifier. The following table lists all objects that can be used with GetAddressLight queries.

**Table 14: GetAddressLight objects**

Objects	Description	Examples	mandatory fields
entryId	Identifier entry record	30731710	Yes
from	Valid from date yyyy-mm-dd		
to	Valid to date yyyy-mm-dd		

## 4 Error Code List

In case of an error, the ETV Inside functionalities return error codes. The errors are used for troubleshooting or localizing the cause of the error. It is recommended to check every response for errors.

In the following table the error code categories are listed.

Table 15: Error Code Categories

Code	Category
200	Authentication
401	Authorization
500	Internal execution error

The following table describes the error codes.

Table 16: Error list

Group	Code	Sub-Code	Message	Description
Authen-tication	200		{ "error": "invalid_grant", "error_description": "Es existiert kein Konto mit dieser E-Mail-Adresse" }	Wrong oAuth username
Authen-tication	200		{ "error": "invalid_grant", "error_description": "Das Passwort ist falsch" }	Wrong oAuth password
General	401	1	Requested LocalUserId is not Connected to Multisource Webservice	API: API request was made with a valid token, but the corresponding Local-ID is not yet associated with a multisource webservice user.
General	401	2	No Access to the current Functionality	The user has no authorization to access this functionality.
General	401	3	No Configuration for this User	The user is not configured.
General	401	4	No Product Access.	The user has no access to the product.
General	401	5	The user ist deactivated.	The user is deactivated.
General	500	0	"Exception Message"	An unintercepted error was triggered. A system exception is thrown.

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General	500	1	No Request Data	The functionality requires additional request parameters.
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## 5 Informations-Code List

The information codes provide general additional information on the query result.

In the following table the info code categories are listed.

Table 17: Info-Code Categories

Code	Category
100	General Informations

The following table describes the information codes.

Table 18: Info-Code List

Group	Source	Code	SubCode	Message	Description
Action Source	General	100	6	Search returned too much data. Result is reduced to 50.	The search has exceeded the applicable limit for the number of results. The result quantity was restricted to the specified value. The standard result set is 50 entries.
Action Source	General	100	7	Search returned more data than the internal maximum of 200.	The search has exceeded the maximum result set of 200 entries.

## 6 Support

If you have technical problems, such as not being able to access a function or if you have questions about your user name or password, please contact [etv@directoriesdata.ch](mailto:etv@directoriesdata.ch) for assistance.



## 7 List of Figures

<i>Figure 1: oAuth User Profile with «Identification» and «Username» .....</i>	<i>5</i>
<i>Figure 2: Open Authentication Process.....</i>	<i>6</i>
<i>Figure 3: Overview ETV Inside Search Service functionalities.....</i>	<i>9</i>

## 8 List of tables

<i>Table 1: Access points for authentication.....</i>	<i>6</i>
<i>Table 2: Reference Access Token.....</i>	<i>6</i>
<i>Table 3: Response Token Query .....</i>	<i>7</i>
<i>Table 4: WSDL ETV Authentication.....</i>	<i>7</i>
<i>Table 5: Search Service Access Points.....</i>	<i>8</i>
<i>Table 6: WSDL ETV Search Service.....</i>	<i>8</i>
<i>Table 7: Functionalities ETV Search Service.....</i>	<i>9</i>
<i>Table 8: SearchLight objects .....</i>	<i>9</i>
<i>Table 9: Parameter Search-Type.....</i>	<i>10</i>
<i>Table 10: Parameter Result set restriction .....</i>	<i>10</i>
<i>Table 11: Parameter Precision-Group-Type.....</i>	<i>10</i>
<i>Table 12: Example Code Search Light Function .....</i>	<i>12</i>
<i>Table 13: LookupLight objects .....</i>	<i>12</i>
<i>Table 14: GetAddressLight objects.....</i>	<i>12</i>
<i>Table 15: Error Code Categories.....</i>	<i>13</i>
<i>Table 16: Error list .....</i>	<i>13</i>
<i>Table 17: Info-Code Categories.....</i>	<i>15</i>
<i>Table 18: Info-Code List .....</i>	<i>15</i>