Introduction to Company Information API

This document describes general integration guidance to start using Asiakastieto company information API's. Following the documentation you will be building integration into our company search service, which is the most simplest way to consume the company API services.

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About the integration

The XML interface communicates using a secure HTTP protocol with SSL. Where client application forms a specified form of URL, which relays the required parameters, e.g. the user ID, the key identifying the subject, and the payload to the service.

The query integrity is validated using an identifier, called checksum. The checksum is calculated using the SHA-512 algorithm.

After a successful call, the XML API interface returns an XML document containing the payload of the queried information. This payload is called as company information package.

In addition interface to work, proper query parameters and calculated checksum must be present. Calculating the checksum might be tricky so make sure to follow checksum calculation instructions below.

There are two API environments present. Demo and production. Demo environment contains generated test data so you can test freely different kinds of scenarios regarding your implementation. Production environment contains up to date real company information. Environments are separated using URL's called BASE_URL.

Environment	Base URL
demo	https://demo.asiakastieto.fi/services/company5/REST
production	https://www.asiakastieto.fi/services/company5/REST

Querying the API Service

The API is queried using HTTP GET method. A query is built using base parameters listed below and query type parameters specified in the service documentations separately.

Base parameter	Format	Description
userid	Numeric	User identifier is a 12 digits long integer. Eg. 123456123456
passwd	Alphanumeric	Password related to the userid
timestamp	Alphanumeric	See Time Stamp
checksum	Alphanumeric	SHA-512 hash. See Calculating the checksum.

Base parameter	Format	Description
version	Alphanumeric	Eg. 5.01
enduser	Alphanumeric	Specifies customer internal user or used as a cost center for invoicing purposes
reqmsg	Alphanumeric	Always "COMPANY"
format	String	Always "xml"
target	String	TAP1 for demo, PAP1 for production
lang	String	Specifies language for the returned data FI for Finnish EN for English SV for Swedish

Calculating the checksum

Checksum calculation is done at the customer's end, using userid, enduser, timestamp and the pre-shared secret calculation key.

The interface application conducts the security check for the request, based on the given time stamp (current time) and the calculated verification checksum. This procedure eliminates the risk of unintended usage of the integration services in case that userid and password falls into wrong hands.

Time stamp

The time stamp is supplied in the parameter timestamp, and it is formatted as follows:

YYYYMMDDHHMMSSXXTZNNNNNN

Where:

YYYY	year in four digits. Eg. 2020
MM	month 01-12
DD	day of the month 01-31
HH	hour 00-23
MM	minutes 00-59

SS	seconds 00-59
XX	hundredths of a second 00-99
TZN	time zone correction in relation to GMT. In Finland always "+02". Note that plus has to be included. The offset from GMT is always presented in relation to local normal time, daylight saving time (DST) is not added to the correction value.
NNNNN	Consecutive number. In most cases always use 00000.

Verification

The verification hash (checksum) is calculated by first forming a string from the query parameters following the secret key, separated using &. Note that you need to put &-mark at the end of the string as shown below.

Checksum string: userid&enduser&timestamp&key&

The checksum string is then hashed with SHA-512 algorithm and the result is converted to the uppercase letters. The checksum is a 128 characters long alphanumeric string.

Example checksum scenario

Parameter	Value
userid	123456123456
enduser	ccccc
timestamp	2020010111000000+0200000
key	9Gk487z6qBC48R27hpq6RBPoS1hWt88Z755Ku7ub5M5NE08HRj2Mt7KOQhtL0spr

checksum string =
123456123456&ccccc&2020010111000000+0200000&9Gk487z6qBC48R27hpq6RBPoS1hWt88Z755Ku7ub5M5NE08HRj2Mt7KOQhtL0spr&

checksum =
442B66F745DE4CAF0A1E6DC551C9C676205498C7CDF28036DB2229573A12D71C14F13430A1E34D6B4CAF1360E9573931019A7DACB27178D5998B97F4301D54EE

Note: CAPITALIZED letters.

Company Search

Company search service can be used to find a company using search term such company name.

Request

HTTP / GET

```
BASE_URL?qtype=01&segment=A&request=N&name=Asiakastieto
```

Company search example request:

HTTP / GET

```
https://demo.asiakastieto.fi/services/company5/REST?
userid=123456987654&
passwd=UiK6Tgz&
timestamp=2019020715491800%2B0200000&
checksum=C76AFE60E4AFCD2CB4CB978BCD51BD62D9B81E18B68F36BF0E49C9F809422E5386DCC98316FC
27E49BB5875A0151B5E48BDF3D3A28D9A057AA286F909BC22070&
version=5.01&
enduser=ccccc&
reqmsg=COMPANY&
format=xml&
target=TAP1&
lang=EN&
segment=A&
qtype=01&
request=N&
name=asiakastieto
```

BASE_URL highlighted as blue, parameters as follows:

Parameter	Type	Description	Mandatory	Default value	Max length
segment	String	Always "A"	Yes		1
qtype	String	Query type. Always "01" (ZeroOne)	Yes		2
request	String	Always "N"	Yes		1
name	String	Search term. Company name "Asiakastieto" or part of the company name "Asiakast"	Yes		60

Response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<response xmlns="http://www.asiakastieto.fi/XMLSchema/Company_5_00.xsd"
          xmlns:cmn="http://www.asiakastieto.fi/XMLSchema/Common_5_00.xsd">
    <companyResponse>
        <responseHeader>
            <cmn:languageCode>EN</cmn:languageCode>
            <cmn:timeStamp>
                <cmn:date>2019-02-07</cmn:date>
                <cmn:time>15:36:16</cmn:time>
            </cmn:timeStamp>
            <cmn:responseStatus>0</cmn:responseStatus>
            <cmn:currencyCode>EUR</cmn:currencyCode>
        </responseHeader>
        <listOfCompaniesRow>
            <sKey>161689</sKey>
            <identificationData>
                <businessId>01110279</businessId>
                <name>Suomen Asiakastieto Oy</name>
                <domicile>Helsinki</domicile>
                <address>
                    <cmn:street>Verkkosaarenkatu 5</cmn:street>
                    <cmn:zip>00580</cmn:zip>
                    <cmn:town>Helsinki</cmn:town>
                </address>
            </identificationData>
            <target>
                <type>0</type>
            </target>
        </listOfCompaniesRow>
        <listOfCompaniesRow>
            <!-- Another company -->
        </listOfCompaniesRow>
    </companyResponse>
</response>
```

Element name	Type	Description
sKey	Integer	Asiakastieto ID

Element name	Type	Description
identificationData		
businessId	String	Company business ID
name	String	Company name such Suomen Asiakastieto Oy
domicile	String	Domicile of the company
address		Company visiting address
street	String	Street name
zip	String	Postal code 5 digits
town	String	Town or city name
target		
type	String	0 = Company 1 = Group A = Old name (Trade register) B =Auxiliary business name D =Parallel business names of the auxiliary business name F = Parallel business name H = Old name (YTJ) L = Trading name U = Old name of the group X = Company to be founded Y = Trading name of the group