

Suomen Asiakastieto Oy Integration Interfaces

Consumer REST AT 2018

Suomen Asiakastieto Oy | Part of Enento Group

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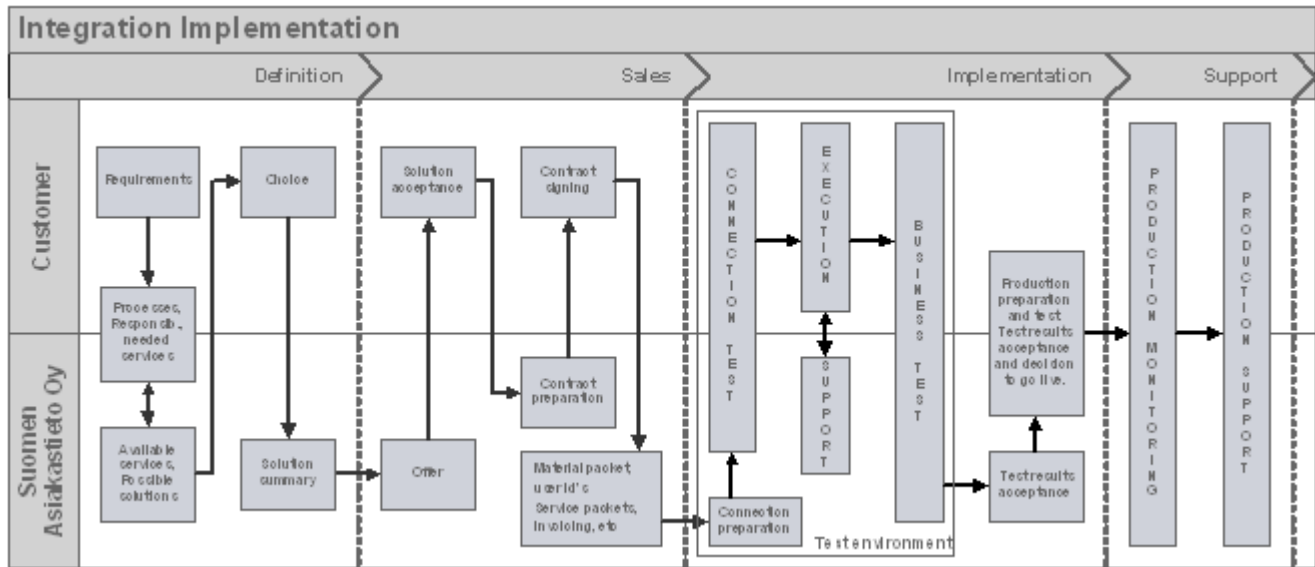
Document History

Version	Date	Issuer	Issue
1.0	4.9.2018	Marko Lehto	First version.
1.1	19.3.2021	Jussi Korkonen	Added company contacts new version
1.2	5.10.2021	Katri Rautiainen	Consumer credit check Example fixed
1.3	28.2.2022	Katri Rautiainen	Logo updated
1.4	2.3.2022	Katri Rautiainen	New format
1.5	13.7.2022	Katri Rautiainen	Decision service model max length
1.5.1	17.11.2022	Jussi Korkonen	JSON request information
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1.6	3.7.2023	Katri Rautiainen	Person's company contacts added
1.7	18.9.2023	Jussi Korkonen	Positive credit register extract
1.8	11.10.2023	Jussi Korkonen	Added Basic Fi population level

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Process Description



When implementing the integration interface into use the process is:

Definition:

- Customer has identified the requirements to fulfill their business needs.
- Customer and Sales Person walk through Customer’s processes, Sales Person explains Customer’s responsibilities and they plan what are the needed services.
- Sales Person and Specialist define existing services and propose a few solutions.
- Customer makes a decision on the solution.
- Sales Person and Specialist make a summary of the definition.

Sales:

- Sales Person makes an offer and Customer accepts it if ok.
- Sales Person prepares the contracts like Service Contract, Integration Contract, Population Information System Contract and Customer signs them.
- After the signing of the contracts, Sales Person prepares and orders user ID’s, service packets, invoice methods, etc and Specialist makes a material packet according to the definition and delivers it to Customer.

Implementation in Test Environment:

- Network Specialist prepares connections for test like VPN, firewall settings etc, according to the definition and tests connection with Customer.
- Customer does coding, functional testing and other internal development work.
- After accepted test, implementation can be moved to production environment.

Implementation in Production Environment:

- In production preparation Network Specialist prepares VPN, firewall settings etc, for own production environment if needed.
- Customer moves implementation to own production environment if needed.
- After accepted test, Customer and Sales Person make a decision about going live.

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Support:

- In the beginning of the production use there is a short monitoring period for checking that everything works correctly.

The REST interface Version AT 2018 Consumer

The REST interface is based on HTTPS calls. The interface is SSL encrypted. Client's application forms a specified-form URL, which contains the required parameters, e.g. the user ID, the key identifying the subject, and the data on which operation of service is requested. The message is protected by an identifier, which is calculated on the basis of the SHA-512 algorithm. The REST interface returns an XML or JSON page containing the data contents of the selected service.

Schema

both XML and JSON

http://www.asiakastieto.fi/XMLSchema/SAT_security.xsd

http://www.asiakastieto.fi/XMLSchema/AT_Common_2018.xsd

http://www.asiakastieto.fi/XMLSchema/AT_Consumer_2018.xsd

http://www.asiakastieto.fi/XMLSchema/SAT_consumer_loan.xsd

http://www.asiakastieto.fi/XMLSchema/SAT_common.xsd

Services in the REST interface

- Consumer Payment Defaults
- Consumer Payment Default Classification
- Consumer loan summary
- Consumer scoring
- Population Register Information and area description (separate permission needed)
- (name, address, etc.)
- Decision support service for companies and consumers
- Simppeli decision proposal about given person
- Risk Indicator
- Risk Forecast
- Risk Indicator with Population Information
- Rating Delta
- Rating Alfa
- Monitoring maintenance
- Person information of the Nordic countries

The REST Interface

Format of the URL for REST requests.

The URL is formed according to the following syntax:

Fixed part:

<https://www.asiakastieto.fi/services/consumer5/REST?> (Production)

<https://demo.asiakastieto.fi/services/consumer5/REST?> (Testing)

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JSON request

For JSON response please add the following headers to the http request.

Accept: application/json

Content-Type: application/json; charset=utf-8

Note that returned dates can be java milliseconds depending on data source.

Request parameters

General obligatory parameters for Consumer requests

Name	Description	Max length
userid	User ID, given by SAT	12
passwd	password, given by SAT	10
timestamp	Time stamp for calculating the URL checksum (more Calculating the SHA-512 checksum)	24
checksum	URL check calculated by using the SHA-512 hash value	64 ab
version	2018, interface version for consumer services	
enduser	defines the enduser	12
reqmsg	CONSUMER (consumer request) DECISION (decision support service)	
format	xml, for json see JSON request section	
purpose	reason for use; obligatory when requesting consumers 1 Credit granting 2 Credit control 3 Planning of debt collection 5 Status of person in charge (assessment of a company or person in charge) 6 With the person's own consent 7 Tenancy agreement 8 Assessment of a job applicant or employee 9 Legislation-based right of the authority to obtain information or granting support of authorities A Guarantee or pledge B Definition of terms of agreement, if it is not possible to refuse to make the agreement C Certificate on the ability to manage obligations and prevention of money laundering P Family Relation Check	

Voluntary parameters

Name	Description	Max length
target	Target database requests PAP1 production requests (default) VAP1 for testing company information TAP1 for testing consumer and sole trader information	

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lang	defines the response language, FI= Finnish EN= English SV= Swedish	2
ccenter	cost center; For an enclosure of invoice including transactions sorted by the cost center	20
packet	customized packet code	4

Credit information

Name	Description	Max length
qtype	41	2
idnumber	ddmmyyXnnnC	11
level	1= extensive credit information blank =brief CI; payment remarks	1

Payment default classification

Name	Description	Max length
qtype	42	2
idnumber	ddmmyyXnnnC	11
level	1	

Population register information

Name	Description	Max length
qtype	34 Population Information, Brief level 08 Population Information, Basic level 36 Population Information, Extensive level 37 Population Information, Extensive level 2 Plus 38 Population Information, Debt Collection level 39 Population Information, Basic Plus level 94 Population Information, Fatca 1 95 Population Information, Fatca 2 96 Population Information, Fatca 3 97 Population Information, Fatca 4 98 Population Information, Child custody check A6 KYC Check A4 Dates of birth of the dependents A7 Spouse Relation Check B1 Family Relation Check B2 Family Relation Check, extensive A9 Widow(er) Check A1 Supervisory Data A3 Family Relation, person details A5 Family Relation, children A2 Family Relation, former spouses A8 Family Relation, parents B4 Family Relation, siblings	2

	B5 Basic Fi	
idnumber	ddmmyyXnnnC	11

Consumer Rating Alfa, Delta, Risk Indicator

Name	Description	Max length
qtype	50 Risk Indicator 51 Risk Forecast 54 Rating Alfa (Rating Delta) 55 Risk Indicator with Population Information	2
idnumber	ddmmyyXnnnC	11

Consumer loans

Name	Description	Max length
qtype	90 Consumer loan summary	2
idnumber	ddmmyyXnnnC	11

Person's company contacts

Name	Description	Max length
qtype	27	2
idnumber	ddmmyyXnnnC	11

Decision support service

Name	Description	Max length
qtype	02	2
idnumber	ddmmyyXnnnC	11
request	H	1
model	customized model code	6
C6_input.code	A05 = amount of a credit A08 = customer key depends on the model if obligatory	table
C6_input.value	amount of a credit depends on the model if obligatory	table

Simppli

Name	Description	Max length
qtype	04	2
idnumber	ddmmyyXnnnC	11
request	H	1
model	customized model code	6

Nordic consumer requests

Name	Description	Max length
qtype	12 Nordic person information	2
idnumber	ddmmyyXnnnC	11
country	SWE Sweden NOR Norway DNK Denmark	
qmsg	P3	

Positive Credit Register Extract

Name	Description	Max length
idnumber	ddmmyyXnnnC	8
purpose[1..n]	Enquire purpose codes from Asiakastieto	
qtype	PR	2

Monitoring service, maintenance for consumer objects

URL:

Name	Description	Obligatory	Max length
businessid	nnnnnnN VAT number, search criterion when requesting companies	N/A	8
idnumber	ddmmyyXnnnC	yes	11
objectname	name of a person/ company	yes	
customerkey	for identify customer (e.g., account number)		30
operation	I=insert R=remove Q=query	yes	
monitoringDatabase	Database id, given by Asiakastieto		
notificationCount	defines the number of notifications will be sent		1
paymentsDefaults	which payment defaults will be sent		1
monitoringSettings	monitoringInput		6
version	4.03	yes	

URL Notes

Question mark (?) is used as separator between the fixed part and the parameter part. The separator between the parameters is & character. Each parameter is separated from its value with the equals sign (=).

URL in its entirety must not contain spaces or characters in the so-called 8-bit area (national characters, e.g. åäö). For example, if the password contains characters in the 8-bit area, they have to be entered as their UTF-8 hexadecimal values, set off by percentage characters, in accordance with the http/URL standard. For example, the password PÄIVÄÄ should be entered as the parameter `passwd=P%C3%84IV%C3%84%C3%84`. Blank characters should be entered as %20 e.g. in the parameter `"name=Miehinien%20Mikael"`.

Timestamp consists of time zone correction related to GMT time, the "+" or "-" sign must be included. Notice that in the url the "+" sign must be as UTF-8 value %2B and "-" sign as UTF-8 hexadecimal value %2D.

The checksum (the SHA-512 hash value) is presented as a hexadecimal character string of 128 characters, in which letter symbols are capital letters.

Input parameters for the Decision support service are delivered in two tables. C6_input.code and C6_input.value.

Brackets must be as UTF-8 hexadecimal value "[" as %5B and "]" as %5D.

The first element of C6_input.code is indexed by 0
(C6_input.code%5B0%5D=XXX&C6_input.value%5B0%5D=nnnn), e.g.
C6_input.code%5B0%5D=A05 and C6_input.value%5B0%5D=1000 (amount of the credit).

SHA-512 checksum

Calculating the SHA-512 checksum

Formation of the verified URL is performed at the customer's end, using the secret calculation key the customer and Asiakastieto have agreed upon.

The interface application conducts the security check for the given URL, based on the given time stamp (current time) and the calculated verification. This procedure eliminates the risk that Asiakastieto's actual database user ID and password should fall into wrong hands, in case they are possibly shown in plain text in the target address line of the browser.

Time stamp

The time stamp is supplied with the parameter timestamp, and it is of the following format:

YYYYMMDDHHMMSSXXTZNNNNNN

in which

YYYY	year in four digits
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 +02 (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

Verification

The checksum (SHA-512 hash value) is presented as a hexadecimal string of 128 characters, in which letter symbols are capital letters.

The verification is calculated by using the standard SHA-512 algorithm, forming first a source character string from part of the parameters, and including the secret key known only by the customer and Asiakastieto.

Source character string: `userid&enduser×tamp&key&`

The parameters are placed in succession, set off by & characters as a single uniform character string, and the SHA-512 hash value is calculated for this, which is again placed into the parameter checksum in the final URL. The & character also has to be found at the end of the source character string when performing the calculation. The SHA-512 hash value received is presented as a hexadecimal character string of 128 characters, in which letter symbols are capital letters.

Examples of REST request for testing

Examples

Consumer Credit Information

<https://demo.asiakastieto.fi/services/consumer5/REST?version=2018&lang=FI&userid=nnnnnnnnnnnn&passwd=xxxxxx&enduser=cccc&reqmsg=CONSUMER&idnumber=ddmmyyAnnnX&purpose=1&qtype=41&level=1&format=xml×tamp=2004070713434000%2B0200001&checksum=71BCA0FDF4926E784A1C86B64E528435305B5FFD0952C6B1834F234D44CAC69674E0D7A95A484F1708D82DC623F24D3F331732619E5ED7E3237DA139A8D00643&>

Consumer Payment default Classification

<https://demo.asiakastieto.fi/services/consumer5/REST?version=2018&lang=FI&userid=nnnnnnnnnnnn&passwd=xxxxxx&enduser=cccc&reqmsg=CONSUMER&idnumber=ddmmyyAnnnX&purpose=1&qtype=42&format=xml×tamp=2004070713434000%2B0200001&checksum=71BCA0FDF4926E784A1C86B64E528435305B5FFD0952C6B1834F234D44CAC69674E0D7A95A484F1708D82DC623F24D3F331732619E5ED7E3237DA139A8D00643&>

Population Information, basic level

<https://demo.asiakastieto.fi/services/consumer5/REST?version=2018&lang=FI&userid=nnnnnnnnnnnn&passwd=xxxxxx&enduser=cccc&reqmsg=CONSUMER&idnumber=ddmmyyAnnnX&purpose=X&qtype=08&format=xml×tamp=2004070713434000%2B0200001&checksum=71BCA0FDF4926E784A1C86B64E528435305B5FFD0952C6B1834F234D44CAC69674E0D7A95A484F1708D82DC623F24D3F331732619E5ED7E3237DA139A8D00643&>

Decision support service

https://demo.asiakastieto.fi/services/consumer5/REST?version=2018&userid=nnnnnnnnnnnn&passwd=xxxxxx&enduser=cccc&idnumber=ddmmyyAnnnX&reqmsg=DECISION&qtype=02&model=MALLI1&C6_input.code%5B0%5D=A05&C6_input.value%5B0%5D=1000&C6_input.code%5B1%5D=A08&C6_input.value%5B1%5D=123456&request=H&format=xml×tamp=2005110112264400%2B0200001&checksum=71BCA0FDF4926E784A1C86B64E528435305B5FFD0952C6B1834F234D44CAC69674E0D7A95A484F1708D82DC623F24D3F331732619E5ED7E3237DA139A8D00643&

Simppli

<https://demo.asiakastieto.fi/services/consumer5/REST?userid=nnnnnnnnnnnn&passwd=XXXXXX&enduser=cccc&idnumber=ddmmyyAnnnX&purpose=1&request=H&lang=FI&model=SIMP1&version=2018&qtype=04&reqmsg=DECISION&format=xml×tamp=2008021514330000%2B0200001&checksum=71BCA0FDF4926E784A1C86B64E528435305B5FFD0952C6B1834F234D44CAC69674E0D7A95A484F1708D82DC623F24D3F331732619E5ED7E3237DA139A8D00643&>

Examples of REST request for production

Consumer Credit Information

<https://www.asiakastieto.fi/services/consumer5/REST?version=2018&lang=FI&userid=nnnnnnnnnnnn&passwd=xxxxxx&enduser=cccc&reqmsg=CONSUMER&idnumber=ddmmyyAnnnX&purpose=1&qtype=41&level=1&format=xml×tamp=2004070713434000%2B0200001&checksum=71BCA0FDF4926E784A1C86B64E528435305B5FFD0952C6B1834F234D44CAC69674E0D7A95A484F1708D82DC623F24D3F331732619E5ED7E3237DA139A8D00643&>

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