21 December 2018

1   Retrieving data from the REST interface

Approved information that has been transferred to the register service is available via the REST interface in JSON and XML formats.

Searching for indicators via the REST interface is a two-step process.

1. First you must retrieve all of the material data available in the service.

2. Then the identifier data (business ID, reporting complex, etc.) for the results set can be used to select the correct material. The results set will already have a URL address that can be used to retrieve the indicators pertinent to that particular set.

The retrieval method will naturally depend on the application/browser used to retrieve the data.

1.1   REST interface address

The REST interface is located at:
https://kuntarestusertest.westeurope.cloudapp.azure.com/.

When you access the address, you will see the view below with instructions on how to use the interface.
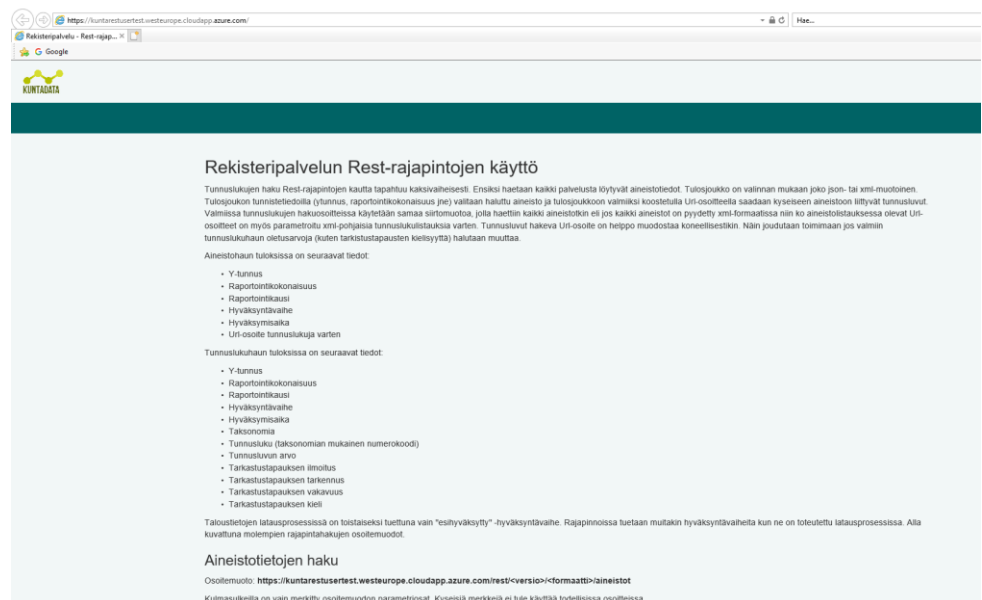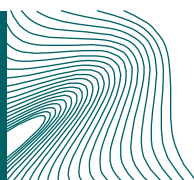

Image 1 The front page of the REST interface of the registry service

In production use, the information is available to everyone through the interface. For the time being, access to the user test environment (https://kuntarestusertest.westeurope.cloudapp.azure.com/) is restricted by a

firewall. Please report your organisation's firewall IP address to the State Treasury via e-mail to kuntadata@valtiokonttori.fi in order to gain access to the test environment.

1.2 Material data retrieval and example searches

You can use the following parameters to search for material data:
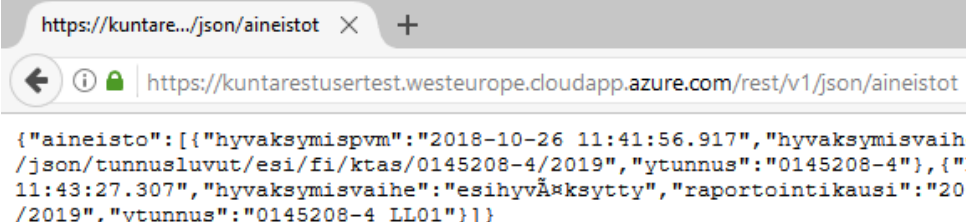
- Version: v1
- Format: json or xml

Based on the above parameters, all of the material data found in the service can be retrieved in:

1. JSON format:
   https://kuntarestusertest.westeurope.cloudapp.azure.com/rest/v1/json/aineistot

2. XML format:
   https://kuntarestusertest.westeurope.cloudapp.azure.com/rest/v1/xml/aineistot .

Below you will find an example of the same material data search implemented with a few different applications.

Example 1. Searching for data in JSON format using the Firefox browser.

When you access the above address with the Firefox browser (https://kuntarestusertest.westeurope.cloudapp.azure.com/rest/v1/json/aineistot), you will see a text displayed in the JSON format

Image 2Searching for data in JSON format using the Firefox browser.

The JSON format can also be displayed in a more readable manner by using add-ons available for the Firefox browser.
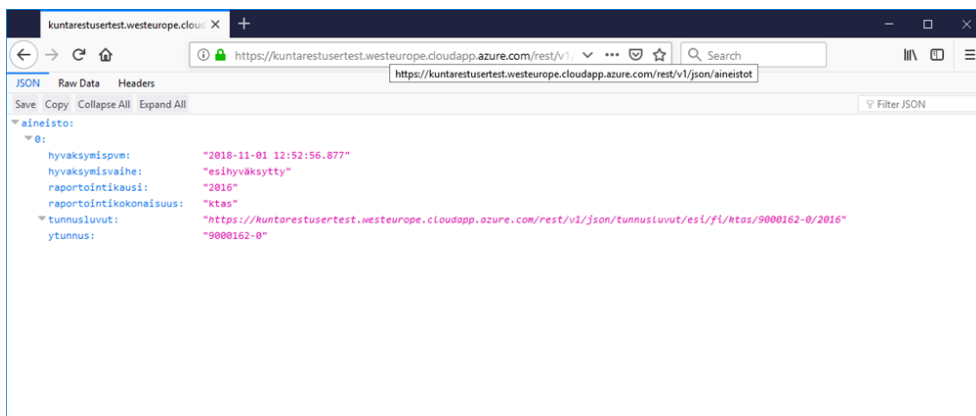
Image 3 Displaying the JSON format in a more readable manner.

Example 2. Searching for data in JSON format using the Internet Explorer browser.

Internet Explorer will prompt you to open the material data (aineistot.json) retrieved from the address using the workstation or save the material data onto the workstation.
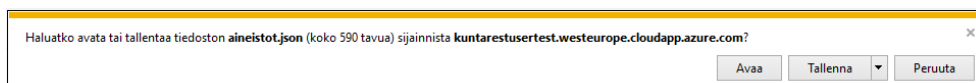

Image 4Searching for data in JSON format using the Internet Explorer browser, download window.

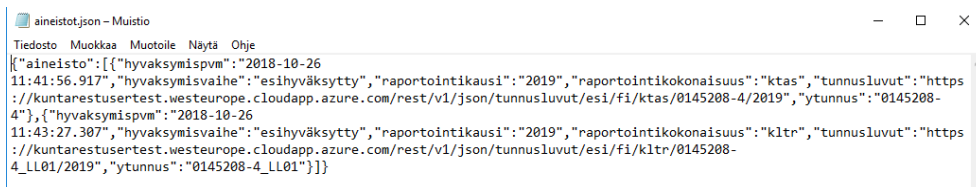After the search, the material data can be opened in a workstation application (e.g. notepad).

Image 5Searching for data in JSON format using the Internet Explorer browser.

Example 3. Searching for data in JSON format using the SoapUI application.

You can retrieve material data using the following command:

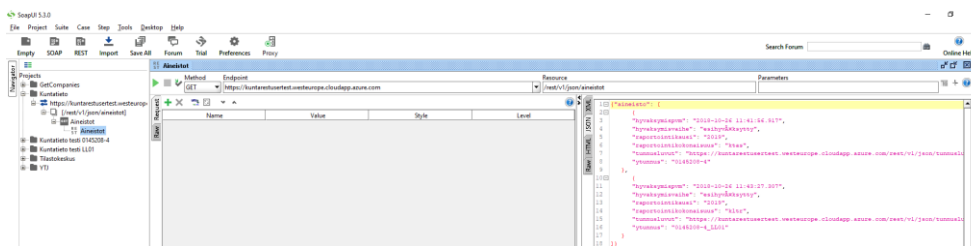GET https://kuntarestusertest.westeurope.cloudapp.azure.com/rest/v1/json/aineistot HTTP/1.1 .

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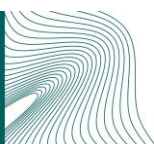
Image 6 Searching for data in JSON format using the SoapUI application.

1.3 Interpreting material data

Material data will contain information on all of the data in the registry service and the following information on each material set:

- Business ID
- Reporting complex
- Reporting period
- Approval phase
- Approval time
- URL for indicators

Image 7 Interpreting material data.

The example search above shows that the test environment registry service contains (13 December 2018) two pre-approved test material sets, one of which belongs to the business ID 0145208-4 and the other to the enterprise 0145208-4_LL01 under the business ID.

1.4 Searching for indicators belonging to a certain material set

Searching for material data was illustrated above. The identifier data (business ID, reporting complex, etc.) for the results set can be used to select the correct material. The results set will already have a URL address that can be used to retrieve the indicators pertinent to that particular set.

The finished indicator search addresses use the same mode of transfer that was used to retrieve all of the material. If all of the material was requested in
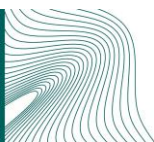
the JSON format, the URL addresses in the material listing in question have also been parameterised for the JASON-based indicator listings. The URL address for retrieving indicators can also be formed automatically. This is the procedure if the parameters (such as the language of the verifications) of the finished indicator search need to be changed.

You can use the following parameters to search for material indicators:

- Version: v1
- Format: json, xml
- Approval phase: pre-approval, final. (At the moment, the downloading process only supports pre-approved material sets.)
- Language: fi, en, sv. The language ID is used to select the language for the verifications related to indicators.
- Reporting complex: ktas, kkytt, kkotr, kknr, kyltas, kktr, oytp, kltr, etc.
- The business ID is the business ID of the municipality: 0145208-4, for example.
- Period: 2016, 2017, etc.

Example 1. Searching for material indicators.

The above search for material data found two material sets in the registry service. The addresses for these material sets for the purposes of indicator searches are as follows

- https://kuntarestusertest.westeurope.cloudapp.azure.com/rest/v1/json/tunnusluvut/esi/fi/ktas/0145208-4/2019

- https://kuntarestusertest.westeurope.cloudapp.azure.com/rest/v1/json/tunnusluvut/esi/fi/kltr/0145208-4_LL01/2019

If you access the first address now, you will be presented with the material belonging to business ID 0145208-4.
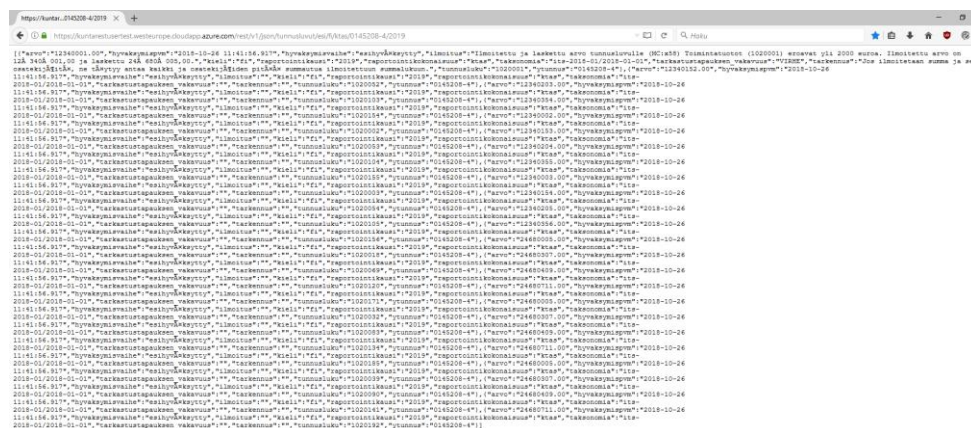

Image 8 Searching for material indicators.

1.5 Interpreting indicators belonging to a certain material set

The following information is available in the indicator search results:

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- Business ID
- Reporting complex
- Reporting period
- Approval phase
- Approval time
- Taxonomy
- Indicator (numerical code in accordance with the taxonomy)
- Indicator value
- Verification notification
- Verification specification
- Verification severity
- Verification language

Below you will find the data of one example observation.

```
{
    "arvo":                              "12340001.00",
    "hyvaksymispvm":                     "2018-10-26 11:41:56.917",
    "hyvaksymisvaihe":                   "esihyväksytty",
    "ilmoitus":                          "Ilmoitettu ja laskettu arvo tunnusluvulle (MC:x58) Toimintatuotot (1020001)
    "kieli":                             "fi",
    "raportointikausi":                  "2019",
    "raportointikokonaisuus":            "ktas",
    "taksonomia":                        "its-2018-01/2018-01-01",
    "tarkastustapauksen_vakavuus":       "VIRHE",
    "tarkennus":                         "Jos ilmoitetaan summa ja sen osatekijätitän, ne tämytyy antaa kaikki ja osa
    "tunnusluku":                        "1020001",
    "ytunnus":                           "0145208-4"
}
```

Image 9 Example observation indicators.

For the time being (14 December 2018), the downloading of financial data only supports the "pre-approved" approval phase. The interfaces also support other approval phases if they are implemented in the downloading process.