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Scottish Government

statistics.gov.scot



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developer tool

SPARQL 1.1 Query: Endpoint

An endpoint that allows you to query the data store using the SPARQL 1.1 language.

[Query API](#)



Preview Try the beta of our [improved SPARQL editor](#).

Enter Query

```
x  
1  
PREFIX dcat: <http://www.w3.org/ns/dcat#>  
2  
PREFIX dcterms: <http://purl.org/dc/terms/>  
3  
PREFIX owl: <http://www.w3.org/2002/07/owl#>  
4  
PREFIX qb: <http://purl.org/linked-data/cube#>  
5  
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>  
6  
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>  
7  
PREFIX sdmx: <http://purl.org/linked-data/sdmx/2009/concept#>  
8  
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>  
9  
PREFIX void: <http://rdfs.org/ns/void#>  
10  
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>  
11  
  
12  
SELECT *  
13  
WHERE {  
14}
```

```
?s ?p ?o
15
}
16
```

17

LIMIT 100

Results format html json
 Validate URLs

SPARQL API: The Basics

The most flexible way to access the data is by using SPARQL, a query language, analogous to SQL for relational databases, for retrieving and manipulating data from graph databases like ours. We support [SPARQL 1.1](#) query syntax. Many [online tutorials](#) are available.

To submit a SPARQL query from your code, you issue an HTTP GET or POST to our endpoint:`http://statistics.gov.scot/sparql`, with the query itself as a url-encoded parameter called `query`.

For example, to run the following simple SPARQL query and get the results as JSON:

```
SELECT * WHERE {?s ?p ?o} LIMIT 10
```

Option 1: POST (recommended)

Issue a POST to the endpoint, with the query in the body, and an Accept header of `sparql-results+json`:

```
POST http://statistics.gov.scot/sparql HTTP/1.1
Host: statistics.gov.scot
Accept: application/sparql-results+json
Content-Type: application/x-www-form-urlencoded

query=SELECT%2A+WHERE+%7B%3Fs+%3Fp+%3Fo%7D+LIMIT+10
```

Option 2: GET

Issue a GET to the following URL (note the `.json` extension - see the [formats](#) section for more detail on this):

```
GET http://statistics.gov.scot/sparql.json?query=SELECT%2A+WHERE+%7B%3Fs+%3Fp+%3Fo%7D+LIMIT+10
```

Scroll down to the end of this page for [examples](#) of both of these methods in a few different languages.

Results formats

As with other aspects of our API, to get the data in different formats, you can use either (a) a format extension or (b) an HTTP Accept header. Available result formats depend on the type of SPARQL query. There are four main forms:

SELECT queries return *tabular* results, and the formats available reflect this:

Format Extensions	Accept Headers
-------------------	----------------

Format Extensions	Accept Headers
XML .xml	application/xml, application/sparql-results+xml

Format Extensions Accept Headers

Text	.txt, .text	text/plain
CSV	.csv	text/csv

CONSTRUCT and DESCRIBE queries return *graph data*, so the results are available in the same formats as our resource APIs:

Format Extensions Accept Headers

RDF/XML	.rdf	application/rdf+xml
N-triples	.nt, .txt, .text	application/n-triples, text/plain
Turtle	.ttl	text/turtle
JSON-LD	.json	application/ld+json, application/json

ASK queries return a *boolean* result:

Format Extensions Accept Headers

XML	.xml	application/xml, application/sparql-results+xml
JSON	.json	application/json, application/sparql-results+json
Text	.txt, .text	text/plain

Results pagination

We accept `page` and `per_page` parameters for paginating the results of SELECT queries (we automatically modify your query to apply `LIMIT` and `OFFSET` clauses). For other query types (i.e. DESCRIBE, CONSTRUCT, ASK), pagination like this doesn't make so much sense, so these parameters are ignored.

For requests made through the website (i.e. HTML format), the page size is defaulted to 20. For requests to our sparql endpoint for data formats (i.e. non-HTML), there will be no defaults for these parameters (i.e. results are unlimited. For performance reasons we generally advise LIMITing your query if possible).

Parameter Substitution

You can parameterise your SPARQL by including `{tokens}` in your queries, and providing values for the tokens in the request parameters.

Note that the following tokens are reserved and cannot be used as parameters for substitution:

- controller
- action
- page
- per_page
- id
- commit
- utf8
- query

Cross Origin Resource Sharing

Our servers are configured to allow access from all domains. This means that if you're writing JavaScript to request data from our server in to a web page hosted on another domain, your browser should check this header and allow it.

If you need to support very old browsers, you can additionally pass a `callback` parameter and the results will be wrapped in that function. For example:

```
http://statistics.gov.scot/sparql.json?callback=myCallbackFunction&query=SELECT%2A+WHERE%7B%3Fs+%3Fp%3Fo%7D+LIMIT+10
```

This [help topic](#) on the jQuery website has more details.

Examples**Using cURL**

Here's a couple of examples running a query using the widely available [cURL](#) command line program.

Request the results as XML, using a POST:

```
curl -X POST -H "Accept: application/sparql-results+xml" -d "query=SELECT%20*%20WHERE%20%7B%3Fs%20%3Fp%20%3Fo%7D%20LIMIT%2010" https://statis
```

Request the results as JSON, using a GET:

```
curl -X GET -H "Accept: application/sparql-results+json" https://statistics.gov.scot/sparql?query=SELECT%20*%20WHERE%20%7B%3Fs%20%3Fp%20%3Fo%
```

Using JavaScript

This example HTML page uses jQuery to issue a POST to our SPARQL endpoint, requesting the results as JSON.

```
<!DOCTYPE html>
<html lang='en'>
<head>
  <script src='http://code.jquery.com/jquery-1.9.1.min.js'></script>
</head>
```

```
<body>
<script type='text/javascript'>

var query = 'SELECT * WHERE {?s ?p ?o} LIMIT 10';
var url = 'https://statistics.gov.scot/sparql.json';
$.ajax({
    method: 'POST',
    dataType: 'json',
    url: url,
    data: {query: query},
    success: function(data) {
        alert('success: ' + data.results.bindings.length + ' results');
        console.log(data);
    }
});
</script>
</body>
</html>
```

Your data cart contains **0 rows** and **0 columns**.

Contact: statistics.opendata@gov.scot.

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