

Client

HTTP

(SPARQL Protocol Layer)

Server (SPARQL Endpoint)

The screenshot shows the SPARQL Query Editor interface. At the top, there are tabs for 'SPARQL Query Editor', 'About', and 'Tables'. Below the tabs, there's a 'Default Data Set Name (Graph URI)' field with the value 'http://dbpedia.org'. The main area is titled 'Query Text' and contains a SPARQL query:

```
SELECT COUNT (DISTINCT ?name AS ?count)
WHERE {
  ?c dbpedia:commonName ?name.
  ?c rdfs:page Wikipedia:Country/en/Europe.
  OPTIONAL { ?c dbpedia:knownIn ?name }
}
```

 Below the query text, there's a 'Results Format' dropdown menu set to 'HTML'. There are 'Execute Query' and 'Reset' buttons. At the bottom, there's an 'Execution timeout' field set to '30000' and a 'millseconds' label. There are also several checkboxes for 'Options' including 'Strict checking of void variables', 'Strict checking of variable names used in multiple clauses but not logically connected to each other', 'Suppress errors on wrong geometries and errors on geometrical operators (failed operators will return NULL)', 'Log debug info at the end of output (has no effect on some queries and output formatting)', and 'Generate SPARQL compilation report (instead of executing the query)'. At the very bottom, there's a copyright notice: 'Copyright © 2014 OpenLink Software' and a version string: 'Virtuoso version 08.03.2019 (4276b0b1c) on Linux (x86_64-generic-linux-glibc25) Single Server Edition (62 GB total memory, 41 GB memory in use)'.

USER INTERFACE

DATABASE