

# SPARQLライブラリの紹介

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第3回Linked Open Data(LOD)活用ワークショップ

# SPARQL結果をそのまま使用

- GET/POSTでクエリ投げるとXMLやJSON等返答
  - GET用URL生成してヘッダーで形式要求
  - SELECT + JSON: "Accept: application/sparql-results+json"
  - SELECT + XML: "Accept: application/sparql-results+xml"
  - CONSTRUCT + Turtle: "Accept: text/turtle"
  - CONSTRUCT + JSON-LD: "Accept: application/ld+json"
- 後は結果を処理すればOK

# SPARQLクライントライブラリ

- クエリやクエリ結果を少し楽に扱いたい
- 大抵の言語にはライブラリあり
  - Ruby: sparql-client
  - Python: SPARQLWrapper
  - Java: ARQ (Jena)
  - PHP: RAP, EasyRDF
  - JS: sparql-client-2
- <https://www.w3.org/wiki/SparqlImplementations>

# ARQ - A SPARQL Processor for Jena

ARQ is a query engine for [Jena](#) that supports the [SPARQL RDF Query language](#). SPARQL is the query language developed by the [W3C RDF Data Access Working Group](#).

## ARQ Features

- Standard SPARQL
- Free text search via Lucene
- SPARQL/Update
- Access and extension of the SPARQL algebra
- Support for custom filter functions
- Property functions for custom processing of semantic relationships
- Aggregation, GROUP BY and assignment as SPARQL extensions
- Support for federated query
- Support for extension to other storage systems
- Client-support for remote access to any SPARQL endpoint

## Introduction

- [A Brief Tutorial on SPARQL](#)
- [Application API](#) - covers the majority of application usages
- [Frequently Asked Questions](#)
- [ARQ Support](#)
- [Application Javadoc](#)
- [Command line utilities](#)
- [Querying remote SPARQL services](#)
  - [HTTP Authentication for ARQ](#)
- [Logging](#)
- [Explaining queries](#)
- [Tutorial: manipulating SPARQL using ARQ](#)
- [Basic federated query \(SERVICE\)](#)

## Advanced SPARQL use

Features of ARQ that are now legal SPARQL 1.1:

- [Property paths](#)
- [GROUP BY and counting](#)



A PHP library designed to make it easy to **consume** and **produce** RDF.

Designed for use in mixed teams of experienced and inexperienced RDF developers. Written in [PSR-2](#) compliant PHP and tested extensively using [PHPUnit](#).

[Getting Started »](#)

The latest stable version of EasyRdf is version [0.9.0](#).

## Example

```
$foaf = new EasyRdf_Graph("http://njh.me/foaf.rdf");
$foaf->load();
$me = $foaf->primaryTopic();
echo "My name is: ".$me->get('foaf:name')."\n";
```

## Requirements

- PHP 5.3 or newer
- The [pcre](#) extension (enabled by default)
- The [mbstring](#) extension (usually available)

## Features

- Extensive unit tests written using [PHPUnit](#)
- Built-in parsers and serialisers: RDF/JSON, N-Triples, RDF/XML, Turtle
- Optional parsing support for: [ARC2](#), [Redland Bindings](#), [rapper](#)
- Optional support for [Zend\\_Http\\_Client](#)
- No required external dependencies upon other libraries (PEAR, Zend, etc...)
- Complies with the [PSR-2](#) coding style
- [Type mapper](#) - resources of type [foaf:Person](#) can be mapped into PHP object of class [Foaf\\_Person](#)
- Support for visualisation of graphs using [GraphViz](#)
- [Composer](#) compatible
- Comes with a number of [examples](#)

Written and maintained by [Nicholas Humfrey](#).

The library is licensed under the [BSD 3-Clause](#) license and documentation under [CC BY 3.0](#).

The examples are in the public domain, for more information see [unlicense.org](#).



This repository

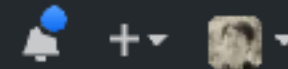
Search

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ruby-rdf / sparql-client

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&lt;&gt; Code

! Issues 8

🔀 Pull requests 0

📁 Projects 0

Insights

SPARQL client for Ruby. <http://rubygems.org/gems/sparql-client>

🕒 361 commits

🌿 7 branches

📦 31 releases

👤 27 contributors

📄 Unlicense

Branch: develop

New pull request

Create new file

Upload files

Find file

Clone or download

gkellogg committed on GitHub Merge pull request #81 from bryant1410/develop

Latest commit 546482a on 17 Apr

etc	Fix doap file.	4 years ago
examples	Use Travis "trusty" build and wildcard Ruby versions.	4 months ago
lib/sparql	Update webmock to ~> 2.3.	7 months ago
spec	Add support for MINUS, pretty much equivalent to UNION support.	9 months ago
.gitignore	Add support for UNION, either with triple patterns, subquery, or bloc...	9 months ago
.travis.yml	Use Travis "trusty" build and wildcard Ruby versions.	4 months ago
.yardopts	Renamed the CONTRIBUTORS file to CREDITS.	7 years ago
AUTHORS	Corrected my email address in the AUTHORS file.	5 years ago
CONTRIBUTING.md	Fix CONTRIBUTING typos.	a year ago
CREDITS	disable webmock for rdf-spec repo tests and reenable repo tests	3 years ago
Gemfile	Remove wirble from Gemfile, as dependency-ci objects that it has no l...	a year ago
Gemfile-pure	Update minimum ruby version. and change sxb repo location in Gemfiles.	a year ago

<https://github.com/ruby-rdf/sparql-client>

# Ruby

```
#!/usr/bin/env ruby
# -*- coding: utf-8 -*-

require 'sparql/client'
client = SPARQL::Client.new("http://ja.dbpedia.org/sparql")
query = "SELECT * WHERE { ?s ?p ? o . } LIMIT 10"
client.query(query).each do |solution|
  puts solution.inspect
end
```

# 演習用コードサンプル

- <https://github.com/KnowledgeGraphJapan/sparql-library-examples>
- お気に入りの言語で試す
- エンドポイントをWikidataに変えてみる
  - <https://query.wikidata.org/sparql>
- クエリを変えてみる
- プログラムで表示とか工夫してみる