RACS is a component of the PACTE platform for text annotation. Users define annotation schemas, manually annotate texts and run specialized annotation services, which can potentially generate thousands of automatic annotations.

The development of this platform led to the need of a specialized annotation storage engine.

- **Context**
  - **PACTE**
  - http://pacte.crim.ca
  - RACS is a component of the PACTE platform for text annotation.

- **Design Requirements**
  - Store raw texts in individual corpus.
  - Retrieve texts via natural language search.
  - Create annotation buckets and link specific annotation schemas to each.
  - Store annotations in buckets.
  - Retrieve annotations via criteria search (corpus, bucket, document).
  - Retrieve annotations via natural language search.
  - English or French support for natural language search.
  - Scalability.

- **Technologies**
  - Swagger
  - Web API Specifications
  - JSON
  - Store raw text and annotations
  - JSON Schema
  - Name and types of annotation attributes
  - Python
  - Business Domain Implementation
  - Elasticsearch
  - Storage of texts, schemas and annotations
  - Docker
  - Packaging

- **Current Issues**
  - Some aspects of the solution are tightly coupled to the annotation platform.
  - Concurrency problems.
  - No authentication or permission management.

- **Next Steps**
  - Use locks to manage Elasticsearch resources.
  - Use subcorpora to further alleviate concurrency problems.
  - Better separation of platform-specific operations and generic operations for increased reusability.

https://science.canarie.ca/res/136
https://github.com/crim-ca/RACS
http://pacte.crim.ca/docs/racs/latest/