Perl 6 MongoDB driver

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Abstract

MongoDB is a *Non SQL* database which uses *Binary JSON* to store and load information in a database. With the mongodb package a shell program called mongo is available to give instructions to a mongodb server.

To work with data on the server from within a program a driver is needed. There are drivers for many program languages. This document describes a driver for the Perl6 language. In the perl6 ecosystem, which might grow into a cpan like system later, there are two packages needed to work with the driver. These are *MongoDB* and BSON. BSON is automatically installed with other necessary modules.

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1. Introduction

The purpose of this document is to show how to work with the perl6 mongodb driver and not about how to design your database among other things. There are plenty of good books and documents out there not to mention the mongodb website. A few things need to be repeated in this document however, despite the information displayed elsewhere because otherwise too many references to other places would disturb the flow. There quite a few modules written to perform the tasks at hand but not all modules will be explained here because many of them are modules defining classes to be used in the background and are not used by applications directly.

This document assumes that the reader is aware of at least the basics of the mongodb database and what one can do with it. Also some perl 6 knowledge will be necessary.

As a last remark, the driver is still in development. Although many parts are accomplished, some parts still need to be implemented like authentication agains kerberos or LDAP. Furthermore, there are some improvements needed to speedup the operations.

The following sections will be explained:

- *Implementation*.

- *BSON::Document*. This is the basic vehicle to insert, update retrieve and send commands to the database server. In this section there is an explanation of the supported types as well as different ways to make requests. Some detailed perl6 is necessary to understand mistakes often made when creating the data structures.
- *URI*. The URI tells the software how to connect to a server and select the proper server.
- *MongoDB::Client*. This module is the starting point of all applications which need access to a mongodb database server.
- *MongoDB::Database*.
- *MongoDB::Collection*.
- *MongoDB::Cursor*.

- *Dependensies*. There are some dependencies which are explained a bit here. These are e.g. the server and its version, modules like BSON, PKCS5, Auth::SCRAM etcetera.
- *Examples*. Of course, a document whithout examples is a bit like an empty box as a present.

2. Implementation

2.1. BSON::Document

2.2. URI

2.3. MongoDB::Client

2.4. MongoDB::Database

2.5. MongoDB::Collection

2.6. MongoDB::Cursor

3. Dependencies

3.1. BSON

3.2. MongoDB server

4. Examples

Biliography

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MongoDB Driver Glossary

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B

Binary JSON	BSON is a computer data interchange format used mainly as a data storage and network transfer format in the MongoDB database.

J

JavaScript Object Notation	JavaScript Object Notation) is an open-standard format that uses human-readable text to transmit data objects consisting of attribute-value pairs

M

MongoDB	MongoDB (from humongous) is a free and open-source cross-platform document-oriented database program

N

Non SQL	A NoSQL (originally referring to "non *Structured Query Language* ", "non relational" or "not only SQL" database provides a mechanism for storage and retrieval of data which is modeled in means other than the tabular relations used in relational databases.

S

Structured Query Language	SQL or Structured Query Language is a special-purpose domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS)