



CLDM Documentation

Release 0.0.1

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INTRODUCTION

CLDM is a distributed dependency manager for Common Lisp.

Its design is similar to that of [Smalltalk Metacello](#). But unlike Metacello, it allows version constraints (like `<`, `<=`, `>=`, `>`) and solves them using Pseudo Boolean Optimization (PBO) as described in [this paper](#). Library dependencies are encoded to PBO and a PBO solver is run afterwards optimizing to get the newest versions of libraries. `minisat+` is the PBO solver being used at the moment, but support for others like `sat4j` is also planned.

Common Lisp libraries and its versions are described in `.cld` files, that should be made accessible to **CLDM** somehow (url, filesystem, git)

Then **CLDM** download the exact versions of dependencies for a given library and version, and puts them in a filesystem directory. After that, pushes their `.asd` definitions to `asdf:*central-registry*` and from that point on `asdf` is in charge.

For instance, here is the library description `.cld` file for some versions of the **Hunchentoot** CL web server:

```
;;; -*- Mode: LISP; Syntax: COMMON-LISP; Package: CL-USER; Base: 10 -*-

(cldm:define-library hunchentoot
  :author "Dr. Edmund Weitz"
  :description "Hunchentoot is a HTTP server based on USOCKET and
               BORDEAUX-THREADS. It supports HTTP 1.1, serves static files, has a
               simple framework for user-defined handlers and can be extended
               through subclassing."
  :cld "http://cldm.github.io/cldm-repo/cld/hunchentoot.cld"
  :tags ("web" "web server")
  :versions
  ((:version "1.2.26"
    :stability :beta
    :description "Latest version"
    :repositories
    ((:official (:url "http://weitz.de/files/hunchentoot.tar.gz"))
     (:github (:git "https://github.com/edycl/hunchentoot.git"
                  :commit "8885f17a15333d1c247a099ee3ced9e49a94103f"))))
    :depends-on
    (:chungas
     :cl-base64
     :cl-fad
     :cl-ppcre
     :flexi-streams
     #- (or :lispworks :hunchentoot-no-ssl) :cl+ssl
     :md5
     :rfc2388
     :trivial-backtrace
     #- :lispworks :usocket
     #- :lispworks :bordeaux-threads))
```

```
(:version "1.2.0"  
  :description "Stable release"  
  :stability :stable  
  :repositories  
  ( (:github (:git "https://github.com/edicl/hunchentoot.git"  
    :commit "2a36b12532958d50ecf0948f8c20b6cff84c4300")))))
```

QUICKSTART

This is in alpha but if you still want to try it out, it can almost load Hunchentoot at the moment.

Download **CLDM** from <https://github.com/cldm/cldm>

```
git clone git@github.com:cldm/cldm.git
```

CLDM depends on ****SBCL**** and **minisat+** so you need to install to be able to build.

On a Ubuntu based Linux system:

```
sudo apt-get install sbcl  
sudo apt-get install minisat+
```

CLDM currently depends on the following Common Lisp libraries:

- alexandria
- anaphora
- ironclad
- md5
- cl-ppcre
- cl-syntax
- esrap
- trivial-shell
- puri
- split-sequence
- cl-fad
- osicat

The best way to obtain them is via [Quicklisp](#)

Make **CLDM** loadable by adding it to quicklisp local-projects, or from **SBCL** systems directory:

```
cd ~/quicklisp/local-projects  
ln -s <cldm directory>/cldm.asdf
```

or:

```
cd ~/.sbcl/system  
ln -s <cldm directory>/cldm.asdf
```

Now you should be able to build the command line binary:

```
sh make.sh
```

And then install it:

```
sudo sh install.sh
```

Finally, you can try to install a library:

```
cldm install hunchentoot
```

CLDM will calculate the required library versions and download them.

Although **CLDM** is distributed in nature, there's central repository in progress here: <http://cldm.github.io/cldm-repo> for generally useful Common Lisp libraries. **CLDM** fetches .cld definitions from there if isn't told otherwise.

BUILD AND INSTALL

Download **CLDM** from <https://github.com/cldm/cldm>

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git clone git@github.com:cldm/cldm.git
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CONFIGURATION

BASIC CONCEPTS

CLD FILES

6.1 Syntax

6.2 Distribution

CLD REPOSITORIES

COMMAND LINE

INDICES AND TABLES

- *genindex*
- *modindex*
- *search*