

# **Conflict-free Replicated Data Type (CRDT)**

Editor collaboration

# Use cases

- Pair programming
- Documenting together
- Planning

# Pros

- Open (unlike other systems)
- Conflict free
- Easy to install
- Share multiple buffers/files in one session
- See other users cursor and region
- Folding will work with all users
- Org mode integration

# Cons

- Weird name

# Other editor support

- Atom: <https://github.com/atom/teletype-crdt>
- Vim: <https://github.com/Sambigeara/fuzzynote>

# Installing - once off

<https://code.librehq.com/qhong/crdt.el>

Install on server and client emacs

```
M-x package-install crdt
```

**Install into emacs  
config**

# Setup package

```
;;; Setup package.el  
(require 'package)  
(setq package-enable-at-startup nil)  
(add-to-list 'package-archives '("melpa" . "https://melpa.org/pac  
(unless package--initialized (package-initialize))
```



# Setup use-package

```
;;; Setup use-package  
(unless (package-installed-p 'use-package)  
  (package-refresh-contents)  
  (package-install 'use-package))  
(eval-when-compile  
  (require 'use-package))  
(setq use-package-always-ensure t)
```

# Setup CRDT

```
;; Collaborating error free!  
(use-package crdt  
  :ensure t  
  :bind  
  (("<f7>" . crdt-connect)  
   ("<f8>" . crdt-share-buffer)))
```

# Config firewall

Port forward

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Port external/internal	6530
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IP	<your computer>
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Only required on the server side

# Use

## 1. Start server in test.org

M-x crdt-share-buffer

## 2. Connect from home

M-x crdt-connect

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URL	mlug-au.org
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Port	6530
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Name	<remote user name>
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# Commands

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crdt-list-  
sessions      Lists users and buffers open

---

crdt-follow-  
user      Follows users cursor through  
buffers & lines

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crdt-  
disconnect      stop

---

crdt-comint      share a shell within emacs (display  
one way only)

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# Demo

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URL	mlug-au.org
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Port	6530
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Name	<remote user name>
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# References

- <https://elpa.gnu.org/packages/crdt.html> Repo website
- <https://code.librehq.com/qhong/crdt.el> Project website.
- [https://en.wikipedia.org/wiki/Conflict-free\\_replicated\\_data\\_type](https://en.wikipedia.org/wiki/Conflict-free_replicated_data_type) Data type the project was built on.

# Questions

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