

‘org-trello’ Manual

Sync Emacs org-mode with Trello.com.

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This manual describes how to install and use the Emacs package ‘org-trello’, version 0.8.1, released 2018-03-18, written and copyright ©2013-2017 by Antoine Dumont, to synchronize org-mode TO-DO lists with Trello.com (<https://trello.com>).

This manual was written with reference to the ‘org-trello’ source-code, which begins with this license and non-warranty statement:

```
;;; org-trello.el
;;; Minor mode to synchronize org-mode buffer and trello board

;;; Copyright (C) 2013-2017 by Antoine R. Dumont (@ardumont)
;;; Author: Antoine R. Dumont <antoine.romain.dumont@gmail.com>
;;; Maintainer: Antoine R. Dumont

;;; Version: 0.8.1
;;; URL: https://github.com/org-trello/org-trello

;;; This file is NOT part of GNU Emacs.

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;;; it under the terms of the GNU General Public License as published by
;;; the Free Software Foundation; either version 3, or (at your option)
;;; any later version.
;;;
;;; This program is distributed in the hope that it will be useful,
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;;; GNU General Public License for more details.
```

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1 CHEK About ‘org-trello’

- Why use ‘org-trello’?
 - You use Emacs org-mode (<https://orgmode.org>).
 - Your team uses Trello.com (<https://trello.com/>).
 - ‘org-trello’ is the bridge between org-mode and Trello.com.
 - Everyone wins!
- Links:
 - Download Zip (<https://github.com/org-trello/org-trello/zipball/master>)
 - Download Tarball (<https://github.com/org-trello/org-trello/tarball/master>)
 - View on GitHub (<https://github.com/org-trello/org-trello>)
- What does your page title ‘org <\$> trello’ mean?

It means “map org functions to the trello world”.

At the time, I was learning Haskell and it made an everlasting awesome impression on me. See fmap’s documentation for more detail (<http://hackage.haskell.org/package/base-4.9.1.0/docs/Prelude.html#v:fmap>).

2 TODO Demo Videos

Please see the HTML version of this manual for links to the demonstration videos. They are not included in the info and PDF-format manuals.

3 Installing ‘org-trello’

This section describes how to obtain and install the ‘org-trello’ package and manual.

3.1 Installing ‘org-trello’ using Package (recommended)

This section describes how to use ‘package’ to install ‘org-trello’.

3.1.1 Using MELPA with Package

This section describes how to use ‘package’ to download and install any packages including ‘org-trello’. If you already use ‘package’ to access “melpa” or “melpa-stable”, you don’t need to do this again. See the next section for how to install ‘org-trello’.

MELPA.org (<https://melpa.org>) is a large repository of ready-to-install Emacs packages. There are two flavors: melpa and melpa-stable. Melpa usually contains the bleeding-edge version of each package. Melpa-stable should contain the last stable releases of the same packages, but the two may be the same. Use Melpa if you like to help test the latest features. Use Melpa-Stable if you want something that just works.

Add the code snippet below (from melpa.org (<https://melpa.org/#/getting-started>)) to your Emacs startup file (.emacs or .emacs.d/init.el). The Melpa repository is pre-selected. If you prefer Melpa-stable, comment out the line for Melpa and uncomment the line for Melpa-stable.

```
;; https://melpa.org/#/getting-started
(require 'package)
(let* ((no-ssl (and (memq system-type '(windows-nt ms-dos))
                   (not (gnutls-available-p))))
      (proto (if no-ssl "http" "https")))

  ;; Comment/uncomment these two lines to enable/disable MELPA and MELPA Stable as des
  (add-to-list 'package-archives (cons "melpa" (concat proto "://melpa.org/packages/"))
  ;;(add-to-list 'package-archives (cons "melpa-stable" (concat proto "://stable.melpa
  (when (< emacs-major-version 24)
    ;; For important compatibility libraries like cl-lib
    (add-to-list 'package-archives (cons "gnu" (concat proto "://elpa.gnu.org/packages
  (package-initialize)
```

After you add this code snippet, exit and restart Emacs or use M-x eval-buffer to re-evaluate your initialization file.

3.1.2 Installing from MELPA with Package

This section describes how to download and install ‘org-trello’ once you have installed Package and configured it to access MELPA.

To load the latest package list from MELPA, type M-x package-refresh-contents.

To install ‘org-trello’ from Melpa, type M-x package-install RET org-trello RET.

Once you have installed the package, please see Section 3.3 [Loading ‘org-trello’ in Emacs], page 4.

3.2 Alternate Ways to Install

This section describes alternate ways to install if you do not use Package and Melpa as recommended.

Note org-trello’s Marmalade package (<http://marmalade-repo.org/packages/org-trello>) is no longer maintained. Use melpa-stable package (<http://melpa-stable.milkbox.net/#/org-trello>) instead.

3.2.1 Download and Install the Tarball

To retrieve the tarball from github (<https://github.com/org-trello/org-trello/releases>), type this at the command line, substituting the /path/to your chosen folder. Replace “0.8.1” with the current version, if different.

```
VERSION="0.8.1"
```

```
wget https://github.com/org-trello/org-trello/releases/download/$VERSION/org-trello-$V
```

Alternately, navigate to ‘org-trello’ on github (<https://github.com/org-trello/org-trello>) with a browser and click on the “releases” link, then locate and download the same file.

Then, inside Emacs, type M-x package-install-file RET /path/to/org-trello-0.8.1.tar RET

3.2.2 Get and Install with el-get

If you use el-get (<https://github.com/dimitri/el-get>) to install packages, you may install the ‘org-trello’ recipe (<https://github.com/dimitri/el-get/blob/master/recipes/org-trello.rcp>) with it. Inside Emacs, type: M-x el-get-install RET org-trello RET.

3.2.3 Clone from GitHub and Install with Cask

Use this section only if you are a developer modifying and testing ‘org-trello’.

Clone ‘org-trello’ from GitHub:

```
git clone http://github.com/org-trello/org-trello.git
```

You can use Cask (<https://cask.github.io/>) to make a local tarball and then install using Emacs:

```
make install package
```

Note ‘install’ will download Cask and ‘package’ will create an ‘org-trello’ tarball archive containing ‘org-trello’.

Now install the built ‘org-trello-\$VERSION.tar’ using Emacs. Type:

```
M-x package-install-file RET /path/to/org-trello-$VERSION.tar RET
```

3.3 Loading ‘org-trello’ in Emacs

Once ‘org-trello’ is installed, it must be loaded into Emacs before it can be used, preferably during initialization of Emacs. Add this in your emacs configuration file (“~/emacs” or “~/emacs.d/init.el”) to load ‘org-trello’ when Emacs starts:

```
(require 'org-trello)
```


Note We do not recommend starting `org-trello-mode` for every org-mode buffer (see <https://github.com/org-trello/org-trello/issues/209>). ‘org-trello’ is an org minor mode that adds trello abilities that unfortunately limit org’s power. It should only be applied to buffers synced with trello.com.

There is a variable to activate ‘org-trello’ only for specific files:

For example: to activate ‘org-trello’ when opening ‘/path/to/file0’ and ‘/path/to/file1’.

```
(custom-set-variables '(org-trello-files '("/path/to/file0" "/path/to/file1")))
```

3.4 Using the ‘org-trello’ manual

This section describes how to build and install the TexInfo-format “org-trello Manual”. TexInfo is the standard documentation format of the GNU-project and is used by Emacs and org-mode. (org-trello is NOT part of GNU emacs.) This manual is presented in three formats:

- INFO hyper-linked text format, to read from within Emacs (or with “info” at the command-line).
- HTML format, to read with a web-browser.
- PDF format, to read or print nicely-formatted on paper.

This org-trello manual may be installed in a folder on your INFOPATH and listed in the INFO directory of manuals. You may access the INFO manual directory of manuals from within Emacs by typing “C-h i d” or from the command-line using the command “info”.

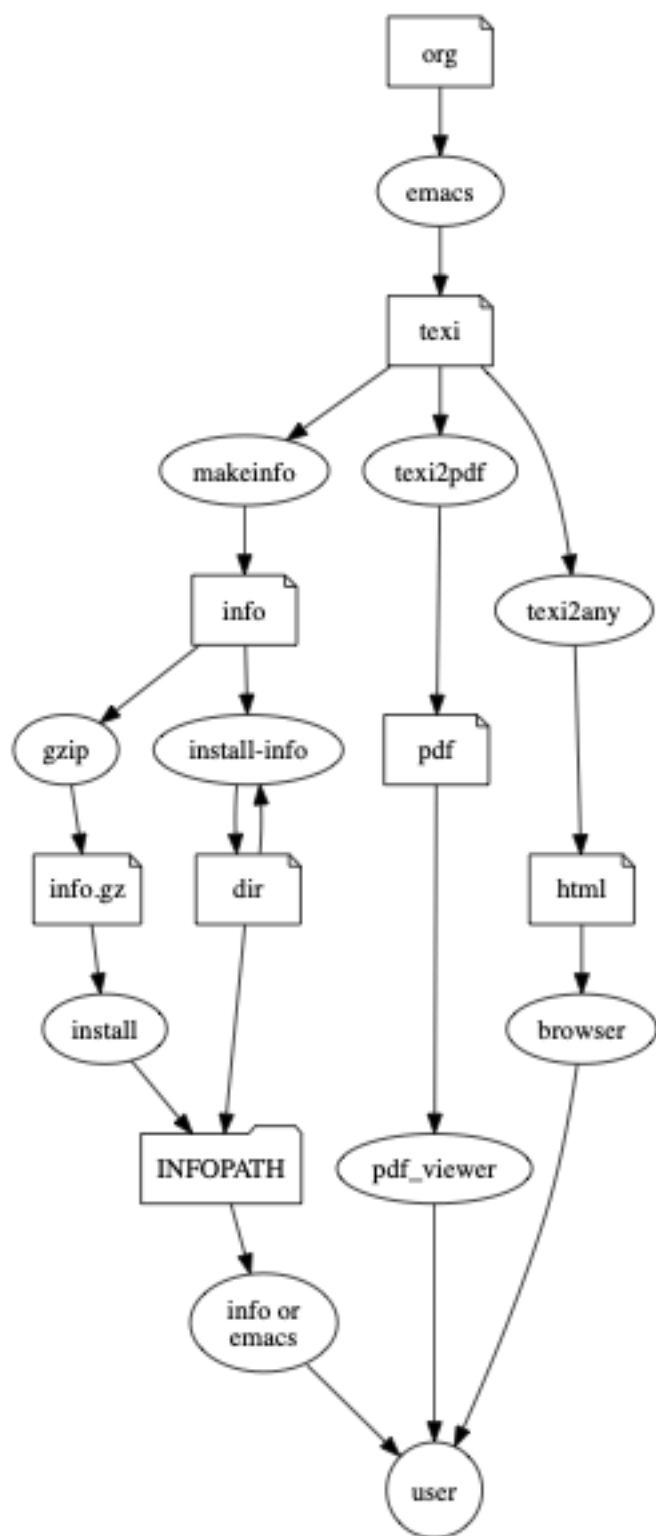


Figure: Building the Manual with Texinfo

3.4.1 Building the Manual

It should not be necessary to rebuild the org-trello manual. The manual is distributed with all three formats already built and ready to read. If the org-trello.info, .HTML and .PDF files already exist, you don’t need to read this section.

This manual was written with Emacs and org-mode as “org-trello.org”, then exported to Texinfo format as “org-trello.texi” using the Texinfo exporter included with org-mode. Then, the .texi file should be converted to .info, .HTML, or .PDF using the commands included with the Texinfo package.

The “Makefile” includes the commands to make all three formats when you invoke it with “make all”. You may also request “make info”, “make view” (to view the new info manual), “make html” and “make pdf”. For any of these commands, you must install Texinfo and edit the top of the Makefile to provide the location of the Texinfo commands.

If you lack Texinfo, you may instead export org-trello.org directly to .info, .HTML or .PDF using Emacs. Without Texinfo, the resulting HTML or PDF document will be slightly different and will not have an index. Texinfo creates a more attractive manual and conforms to GNU style.

3.4.2 Installing the .info Manual

To install the org-trello.info manual so that it may be used by Emacs’ internal info reader or the command-line “info” command, you must:

1. Optionally, use gzip to compress the .info file to .info.gz
2. Copy or “install” the .info.gz (or .info) file into a folder listed in INFOPATH
3. Use “install-info” to insert the new .info.gz file into info’s “dir” file in that folder.

This process is described in the Section “Creating an Info File” in `texinfo`.

If you edit the top of the “Makefile” to provide the location of the folder in your INFOPATH where the .info should be installed, the “Makefile” will execute the gzip, install and install-info commands when you type “make install”.

Once installed, you may invoke the command-line “info” reader or Emacs’ internal info reader to view the listing of info manuals. The info reader assembles the directory of info manuals from all the “dir” files in the INFOPATH and may be different in each reader. Locate “org-trello” in this list or use “m org-trello” to jump to it.

3.5 Migrating to New Releases

If you have previously installed and used a previous release of ‘org-trello’, this section describes how to migrate your existing ‘org-trello’ installation to a new release.

3.5.1 Migrate to 0.8.1

The ‘org-trello’ key properties used in the buffer were clashing with higher org-mode functionality (lookup, cf. <https://github.com/org-trello/org-trello/issues/366>).

Those properties were renamed with clash free names (‘-’ separator symbol was replaced with ‘_’).

To help the migration, a routine has been integrated. This should not be needed by the user though (the migration is integrated to the actions). Still, if the user wants it, (s)he can do it through M-x `org-trello-migrate-buffer`.

3.5.2 Migrate to 0.7.0

As of now, ‘org-trello’ respects elisp conventions regarding the setup file location. So the default `~.trello//` will be moved silently to `~.emacs.d/.trello//`

Also, now users can use multiple trello accounts. So, provided you have multiple accounts, some commands will ask you when they need you to choose an account. Also, a silent migration will occur to existing buffers. For example, if you have a buffer setup-ed with a user *tony*, your existing configuration file `~.trello/config.el/` will be moved to `~.emacs.d/.trello/tony.el/`

Again, ‘org-trello’ tries to respect elisp conventions regarding command names. So the command names have been renamed from *org-trello/* to *org-trello-*. Still, the old command names are available.

3.5.3 Migrate to 0.6.7

The comments are now displayed inline in the card. So the binding to show the comments have been removed. To see comments, simply unfold the card.

3.5.4 Migrate to 0.6.6

We can now remove a comment at point (if we are the owner of the comment). Use `M-x org-trello-delete-card-comment`.

3.5.5 Migrate to 0.5.5

Default bindings have been updated.

Bindings	Action
C-c o C	Add comments to the cards at point. To show the cards comments, use <code>C-u M-x org-trello-add-card-comments</code> (<code>C-u C-c o C</code>)
C-c o o	Removed. To show the cards comments, use <code>C-u C-c o C</code>

Of course, as usual, if you are not happy with this, simply update your configuration file (`bindings.html#bindings-override`).

3.5.6 Migrate to 0.5.3

Lots of work has been done to make ‘org-trello’:

- more responsive (almost no more blocking actions).
- faster (trello queries have been improved to let the trello servers do the computations)

Default interactive commands (`http://org-trello.github.io/bindings.html#keybindings`) names have been renamed to be explicit and aligned between them.

3.5.7 Migrate to 0.5.2

Decision has been taken to remove the intermediary proxy used to bounce requests to trello. This was introduced to permit asynchronous requests. This was only partially applied. So too many lines of code to maintain for small benefits.

This version is synchronous as it was in the beginning (The base code is not the same though).

This is a temporary setback. We need time to craft a better implementation for asynchronous requests (deferred, async libraries seems interesting enough).

3.5.8 Migrate to 0.3.8

‘org-trello’ now tries to enforce symmetry, mainly regarding the sync actions. So by default, an action pushes to trello. Using C-u, the symmetric action pulls from trello.

Bindings	Action
C-c o c	sync the entity TO trello without its structure
C-u C-c o c	sync the entity FROM trello without its structure
C-c o C	sync the entity and its structure TO trello
C-u C-c o C	sync the entity and its structure FROM trello
C-c o s	sync the buffer TO trello
C-u C-c o s	sync the buffer FROM trello
C-c o a	assign yourself to the card
C-u C-c o a	unassign yourself from the card

3.5.9 Migrate to 0.3.1

The old checklist/item format has been removed - <https://github.com/org-trello/org-trello/issues/105>. Now the org checkbox way is the standard one.

3.5.10 Migrate to 0.2.9

For information, from 0.2.9 onward, the property “orgtrello-id” from the checkbox (checklists, items) will be hidden.

Note

- Upon activating ‘org-trello’ minor mode, all existing checkbox will be migrated and should disappear before your eyes.
- Symmetrically, when deactivating ‘org-trello’, all checkbox will appear.
- For this, ‘org-trello’ use overlays (https://www.gnu.org/software/emacs/manual/html_node/elisp/Overlays.html) (implementation detail which permits to hide buffer region).

If you began to use ‘org-trello’, nothing to do.

3.5.11 Migrate to 0.2.8

From 0.2.8 onward, the card description can be synchronized too. Just synchronize as usual.

3.5.12 Migrate 0.2.1 to 0.2.2

From the 0.2.2 version onward, we can assign people to card. As a pre-requisite, we need to re-install the board (C-c o I), so that new properties will be installed (users currently assigned to the board we attach to).

This way, you will be able to use the assign (C-c o a) / unassign (C-c o u) yourself to the card.

3.5.13 Migrate 0.1.5 to 0.1.6

‘org-trello’ now uses more natural ways of dealing with checklists using checkboxes!

cf. natural org format (from 0.1.6 onwards) ([migration.html#natural-org-format-from-016-onwards](#)) for more details.

3.5.14 Migrate 0.1.1 to 0.1.2

- From version 0.1.1, some http requests will be asynchronous. For this, we use elnode as a proxy server to make requests to trello. The elnode server is started on the port 9876. You can always change this port

```
(setq *ORGTRELLO-PROXY-PORT* 9876)
```

Then M-x orgtrello-proxy/reload

4 CHEK Connecting to Trello.com

4.1 Installing Your Trello.com Credentials

You must install the `org-trello-consumer-key` and the read-write `org-trello-access-token` to permit `org-trello` to access your trello boards.

Remark: This procedure only needs to be done once unless you revoke the token.

First, ensure that:

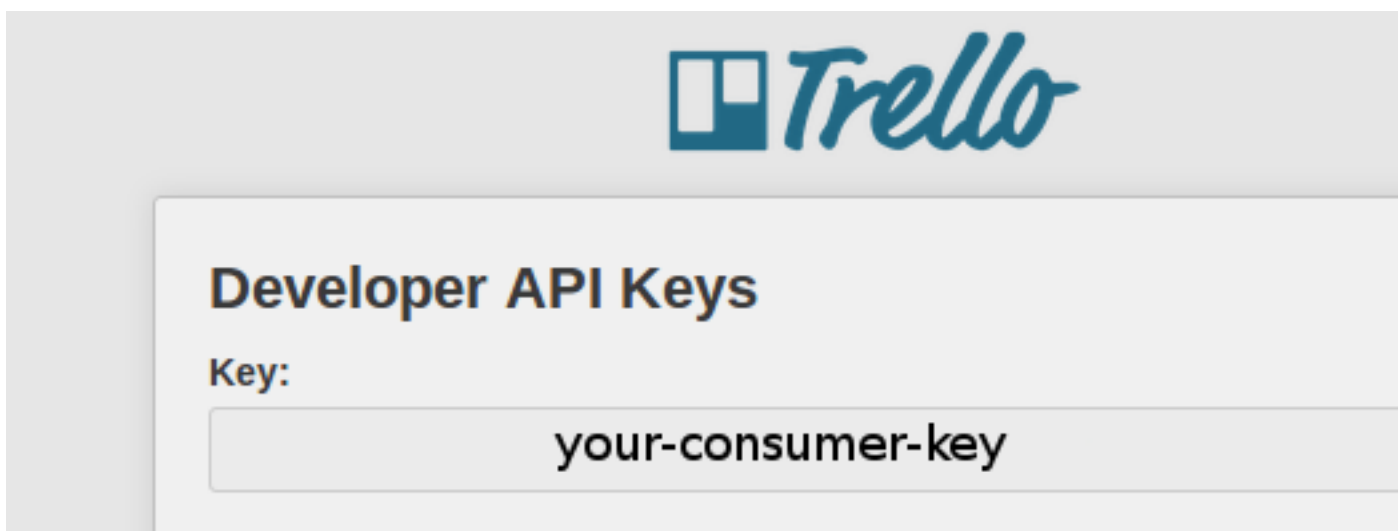
- emacs is configured to use an external web browser. Text-only web browsers internal to Emacs, like `'eww'`, `'w3'` or `'w3m-mode'`, can not execute the required JavaScript.
- the web browser emacs is configured to use is started
- you are logged into Trello.
- you know your exact Trello account name. **DO NOT** use your email address as your account name. To confirm your account name, check that `https://trello.com/*your-account-name*` exists.

Then, in Emacs, type:

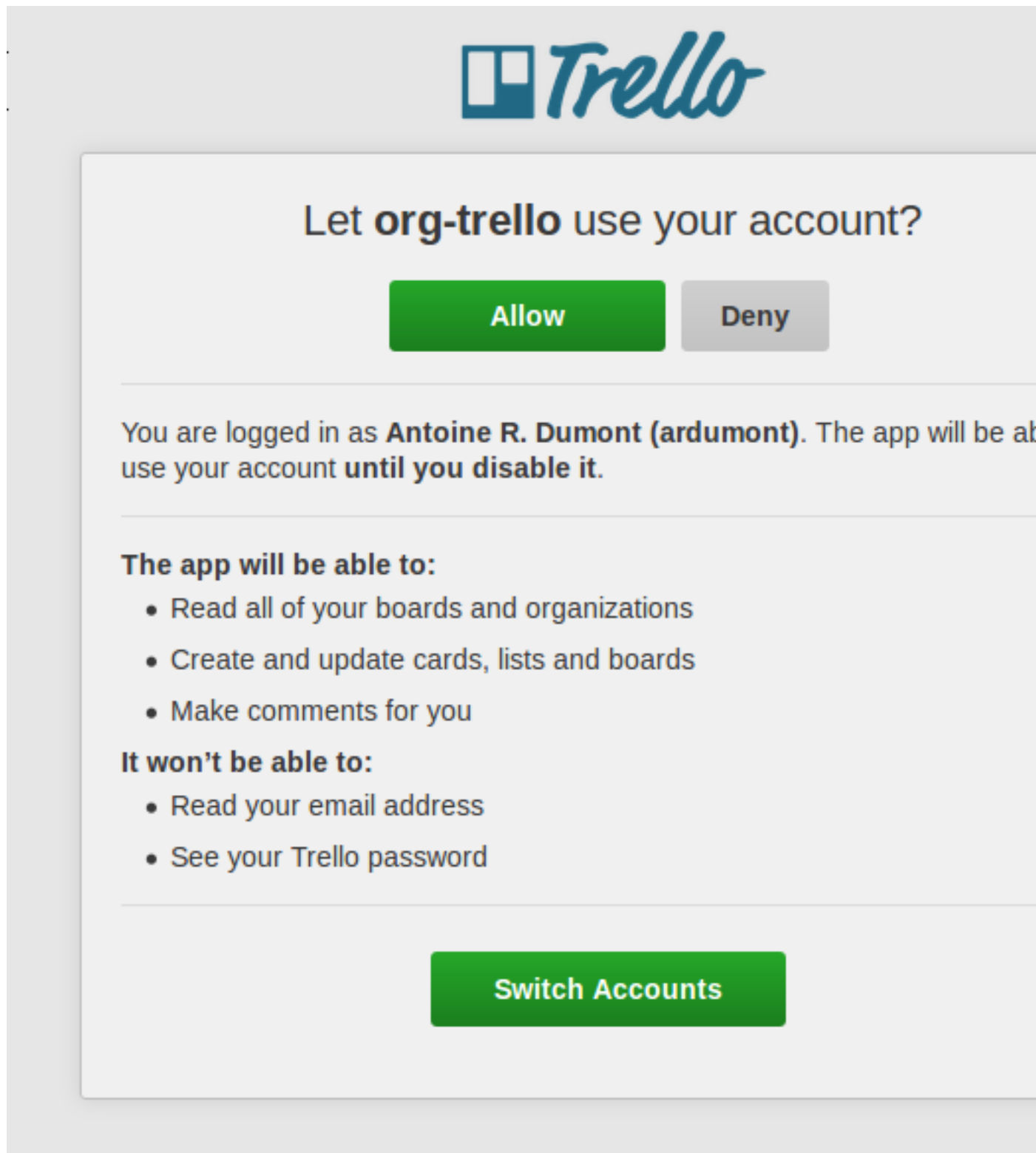
- C-c o i, or
- M-x `org-trello-install-key-and-token`

This command will:

- ask for an account name, which must be your trello login. **DO NOT** use your email address as your account name.
- open your browser for you to select and copy your *org-trello-consumer-key* (Developer API Keys / key entry) and paste it inside emacs' minibuffer (hit RET when done).



- open a second tab to ask you to authorize `org-trello` to work in your name on your account



- If you are not ok with this, hit *Deny*. You won't be able to use org-trello.
- Otherwise, hit *Allow*, this will then present you a form with the read/write *org-trello-access-token*, select and copy it, then paste it inside emacs' minibuffer and hit RET.

Note: This command, if accepted, results in a file stored *only* on your disk in `~/emacs.d/.trello/.el` (this path may vary depending on **user-emacs-directory**).

This file contains your credentials and will be used to identify you when requesting trello.

```
(setq org-trello-consumer-key "abc...") ;; 32 characters string
(setq org-trello-access-token "def...") ;; 64 characters string
```

4.2 Connect an org-mode buffer with an existing Trello board.

For each org-mode file that you wish to use with Trello.com, you need to connect your org-mode file with a Trello board.

Remarks: This procedure must be done only once for each org-mode file you want to sync with a trello board.

To connect an buffer to an existing board, type:

- C-c o I, or
- M-x org-trello-install-board-metadata

This will:

- ask you for the accounts you want to use (if you have multiple ones, otherwise, it will select the only one and pass to the next step silently)
- present you with a list of boards for the selected account. Select the one you want and hit enter.
- edit your org-mode file to add the properties needed.

4.3 Create a Trello board from your org-mode buffer.

You can create a new Trello board from your existing org-mode file.

Remarks: This procedure must be done only once for each org-mode file you want to sync with a trello board.

Type:

- C-c o b, or
- M-x org-trello-create-board-and-install-metadata

This will:

- ask you for the accounts you want to use (if you have multiple ones, otherwise, it will select the only one and pass to the next step silently)
- create the Trello board lists from the keywords configured in your org-mode (cf. org-todo-keywords (http://orgmode.org/manual/In_002dbuffer-settings.html))

5 TODO Using ‘org-trello’

This section describes how to use ‘org-trello’.

5.1 TODO Quick Start

5.2 Command Descriptions

This section describes all commands and their key bindings.

5.2.1 WORK Summary of Commands

All default ‘org-trello’ key-bindings use the “C-c o” prefix.

Note: You may type “C-c o C-h” to display help for most ‘org-trello’ key bindings.

Keys	Command
C-c o C-h	Display help on all key-bindings with C-c o prefix.
C-c o v	Display the version of ‘org-trello’.
C-c o i	Install the Trello.com access key and token.
C-c o I	Choose an existing Trello board and attach this buffer.
C-c o b	Create a new Trello board and attach this buffer
C-c o u	Update this file’s attachment to its Trello board.
C-c o d	Diagnose the setup.
C-c o D	Delete all Trello metadata from this buffer.
C-c o c	Create or Update a complete card.
C-c o s	Synchronize FROM the entire buffer TO Trello.
C-u C-c o s	Synchronize TO the entire buffer FROM Trello.
C-c o g	Abort any synchronization in progress. (like C-g)
C-c \$	Archive the card at point. (Standard org binding)
C-c o A	Archive all DONE cards.

5.2.2 TODO Connection Commands

This section describes the functions used to connect ‘org-trello’ to Trello.com and to attach an org file to a Trello board.

5.2.3 WORK Synchronization Commands

This section describes the synchronization functions.

org-trello-sync-buffer

Type “C-c o s” to sync the entire buffer TO the Trello board.

Type “C-u C-c o s” to sync the entire buffer FROM the Trello board.

5.2.4 TODO Editing Commands

This section describes the functions used to edit cards, comments and list items.

5.2.5 TODO Misc. Commands

This section describes other functions not listed above.

5.3 **TODO** How to...

This section describes how to use commands to perform tasks with ‘org-trello’.

5.4 **TODO** Format of org-trello

This section describes the format of the text in an ‘org-trello’ buffer.

6 CHEK Troubleshooting ‘org-trello’

6.1 Common Issues

This section addresses some common issues with installing and using ‘org-trello’.

- Why am I getting errors about credentials loading, like below?

```
org-trello - Request 'sync org buffer to trello board'...
org-trello - List of errors:
  - Setup problem - Problem during credentials loading (consumer-key
    and read/write access-token) - C-c o i or M-x org-trello-install-key-and-token
  - Setup problem - You need to install the consumer-key and the
    read/write access-token - C-c o i or M-x org-trello-install-key-and-token
```

If you have already Section 4.1 [set up your credentials], page 11, then please make sure the login you used in the credential installation step match your trello login exactly, that is:

- Check ‘https://trello.com/<user-login>’ exists
- ‘<User-login>’ in the buffer is the same as the org-trello login: ‘#+PROPERTY: orgtrello-user-me <user-login>’
 at the org-trello buffer top must match too.
- For issues not listed above, please see Section 8.2 [these instructions], page 22, about the issue list on GitHub.

6.2 Error Messages

‘org-trello’ can display the following possible error messages:

- Failed to set up the consumer-key and the access-token:

```
Setup problem - You need to install the consumer-key and the read/write
access-token - C-c o i or M-x org-trello-install-board-metadata
```
- Failed to setting up the org-mode buffer:

```
Setup problem. Either you did not connect your org-mode buffer with a
trello board, to correct this:
  • attach to a board through C-c o I or M-x org-trello-install-board-
    metadata
  • or create a board from scratch with C-c o b or M-x org-trello-create-
    board-and-install-metadata). Either your org-mode’s todo keyword
    list and your trello board lists are not named the same way (which
    they must). For this, connect to trello and rename your board’s list
    according to your org-mode’s todo list.
```
- The board’s list names are different from your org-mode’s keyword list:

```
Setup problem. Either you did not connect your org-mode buffer with a
trello board, to correct this:
  • attach to a board through C-c o I or M-x org-trello-install-board-
    metadata
```

- or create a board from scratch with C-c o b or M-x org-trello-create-board-and-install-metadata). Either your org-mode's todo keyword list and your trello board lists are not named the same way (which they must). For this, connect to trello and rename your board's list according to your org-mode's todo list. Also, you can specify on your org-mode buffer the todo list you want to work with, for example:


```
#+TODO: TODO DOING
      DONE FAIL (hit C-c C-c to refresh the setup)
```
- No label on the card:

Cannot synchronize the card - missing mandatory label. Skip it. . .
- No label on the checklist:

Cannot synchronize the checklist - missing mandatory label. Skip it. . .
- No label on the item:

Cannot synchronize the item - missing mandatory label. Skip it. . .
- syncing the checklist without syncing the card first:

Cannot synchronize the checklist - the card must be synchronized first. Skip it. . .
- Syncing the item without syncing the checklist first:

Cannot synchronize the item - the checklist must be synchronized first. Skip it. . .

7 Customizing ‘org-trello’

This section describes how you may customize ‘org-trello’.

7.1 Customizing the Prefix Keybinding

By default, ‘org-trello’ uses the prefix keybinding “C-c o” to begin (almost) all of its commands. You may change this by customizing the variable `org-trello-current-prefix-keybinding`.

To customize `org-trello-current-prefix-keybinding`, type `C-h v org-trello-current-prefix-keybinding RET` to display the help text for this variable. Then follow the “customize” link on the last line. You may then use the customize interface to set another prefix keybinding.

Note: If ‘org-trello’ is already running, you must restart emacs after customizing this variable (or run `M-x org-trello-mode - twice`).

You may also change this setting in your emacs initialization file. For example, to change the ‘org-trello’ prefix keybinding to `C-c x` add these lines to your Emacs initialization file (`~/.emacs` or `~/.emacs.d/.init.el`):

```
(require 'org-trello)
(custom-set-variables '(org-trello-current-prefix-keybinding "C-c x"))
```

For an example, please see my startup file (<https://github.com/ardumont/orgmode-pack/blob/master/orgmode-pack.el#L57>).

7.2 Customizing Individual Keybindings

To redefine one or more org-trello-mode command keybindings, you should create a function to define keys in the `org-trello-mode-map` and hook your function to the `org-trello-mode-hook`. This will make ‘org-trello’ run your function each time it starts.

```
(require 'org-trello)

(defun def-my-org-trello-keys () "Define my org-trello keys."
  (define-key org-trello-mode-map (kbd "C-c x v") 'org-trello-version)
  (define-key org-trello-mode-map (kbd "C-c x i") 'org-trello-install-key-and-token)
  (define-key org-trello-mode-map (kbd "C-c x I") 'org-trello-install-board-metadata)
  (define-key org-trello-mode-map (kbd "C-c x c") 'org-trello-sync-card)
  (define-key org-trello-mode-map (kbd "C-c x s") 'org-trello-sync-buffer)
  (define-key org-trello-mode-map (kbd "C-c x a") 'org-trello-assign-me)
  (define-key org-trello-mode-map (kbd "C-c x d") 'org-trello-check-setup)
  (define-key org-trello-mode-map (kbd "C-c x D") 'org-trello-delete-setup)
  (define-key org-trello-mode-map (kbd "C-c x b") 'org-trello-create-board-and-install)
  (define-key org-trello-mode-map (kbd "C-c x k") 'org-trello-kill-entity)
  (define-key org-trello-mode-map (kbd "C-c x K") 'org-trello-kill-cards)
  (define-key org-trello-mode-map (kbd "C-c x a") 'org-trello-archive-card)
  (define-key org-trello-mode-map (kbd "C-c x A") 'org-trello-archive-cards)
  (define-key org-trello-mode-map (kbd "C-c x j") 'org-trello-jump-to-trello-card)
  (define-key org-trello-mode-map (kbd "C-c x J") 'org-trello-jump-to-trello-board))
```

```
(define-key org-trello-mode-map (kbd "C-c x C") 'org-trello-add-card-comments)
(define-key org-trello-mode-map (kbd "C-c x o") 'org-trello-show-card-comments)
(define-key org-trello-mode-map (kbd "C-c x l") 'org-trello-show-card-labels)
(define-key org-trello-mode-map (kbd "C-c x u") 'org-trello-update-board-metadata)
(define-key org-trello-mode-map (kbd "C-c x h") 'org-trello-help-describing-bindings)
```

```
(add-hook 'org-trello-mode-hook 'def-my-org-trello-keys)
```

Note: This will not update the help messages to match your key-bindings nor remove the default keybindings.

You may add several lines like this one to your hook function to remove specific existing ‘org-trello’ keybindings:

```
(define-key org-trello-mode-map (kbd "C-c o v") nil)
```

7.3 Customizing ‘org-trello’ Variables

You may customize ‘org-trello’ settings by typing:

M-x customize-group RET org-trello RET.

You may customize any of the following variables from the user-interface.

Parent groups: Org

Org-trello group: Org-trello customisation group.

State : visible group members are all at standard values.

Org Trello Add Tags

Add trello colors to org tags list?

Org Trello Current Prefix Keybinding

The default prefix keybinding to execute org-trello commands.

Org Trello Files

Org-trello files that needs org-trello activated when opened. Hide

This does not support regular expression.

Org Trello Input Completion Mechanism

The completion mechanism the user can choose from. Hide

Default is the native ido mechanism.

Other possibilities is helm but it’s up to you to install the dependencies.

```
(require 'helm)
```

```
(custom-set-variables '(org-trello-input-completion-mechanism 'helm))
```

Org Trello Mode Hook

Define org-trello hook for user to extend mode with their own behavior.

Orgtrello Log Level

Set log level. Hide

Levels:

```

0 - no log    ('orgtrello-log-quiet')
1 - errors   ('orgtrello-log-error')
2 - warnings ('orgtrello-log-warn')
3 - info     ('orgtrello-log-info')
4 - debug    ('orgtrello-log-debug')
5 - trace    ('orgtrello-log-trace')
To change such level, add this to your init.el file:
(custom-set-variables '(orgtrello-log-level orgtrello-log-trace))

```

Orgtrello Setup Use Position In Checksum Computation

Let the user decide if (s)he wants to use the position in the checksum. Hide
The checksum is a hash computation of the current entity’s data to prevent
sending too many sync requests if unnecessary (no real change since last time).

If t, when sync to trello, any change for the current entity will be reflected
in trello’s board. However, a global sync to trello, will trigger many
unnecessary sync to trello queries for any entity below the current entity
changed... Indeed, the position changes anytime you insert or delete a char.
This renders almost useless the checksum computation.

Cf. <https://github.com/org-trello/org-trello/issues/271>.

Please, do not hesitate to provide a better idea or a better implementation.

If nil, the default, the sync to trello will be limited to what’s really changed
(except for the position). So the entity’s position in trello’s board can be
slightly different than the one from the buffer.

Orgtrello With Check On Sensible Actions

Some action can be dangerous removing entity for example. Hide
This custom determine if the user wants to be asked confirmation
before doing some of those sensitive actions.

7.4 Example Emacs-Lisp Customization

Here is an example of how to configure ‘org-trello’ user-customized variables using emacs-lisp:

```

(custom-set-variables
 '(orgtrello-log-level orgtrello-log-debug) ;; log level to debug
 '(org-trello-current-prefix-keybinding "C-c x") ;; C-c x as the default prefix
 '(orgtrello-setup-use-position-in-checksum-computation nil) ;; checksum without pos
 '(org-trello-files '("~/docs/some-doc.trello"
                      "~/docs/some-other-doc.org"))) ;; automatic org-trello on file

```

To set these variables for the current session, place the cursor after the entire s-exp and
evaluate it using “M-x eval-last-sexp”.

To make these settings permanent in later sessions, put this code inside your emacs setup
file (“~/emacs” or “~/emacs.d/init.el”).

7.5 Automatic ‘org-trello’ Files

To have emacs automatically start ‘org-trello’ when you open a file with a “.trello” extension, add this to your personal emacs setup file:

```
;; org-trello major mode for all .trello files

(add-to-list 'auto-mode-alist '("\\.trello$" . org-mode))

;; add a hook function to check if this is trello file,
;; then activate the org-trello minor mode.

(add-hook 'org-mode-hook
  (lambda ()
    (let ((filename (buffer-file-name (current-buffer))))
      (when (and filename (string= "trello" (file-name-extension filename)))
        (org-trello-mode))))))

source: https://github.com/org-trello/org-trello/issues/249
```

8 Development of ‘org-trello’

8.1 Credits

Many thanks to all the contributors (<https://github.com/org-trello/org-trello/graphs/contributors>) to ‘org-trello’, including:

@dtebbs (<https://github.com/dtebbs>)

PR - fix on the card description (<https://github.com/org-trello/org-trello/pull/173>)

@jasom (<https://github.com/jasom>)

PR - improvements on the trello card’s description rendering (<https://github.com/org-trello/org-trello/pull/175>).

@nicferrier (<https://github.com/nicferrier>)

marmalade (<http://marmalade-repo.org/>), elnode (<https://github.com/nicferrier/elnode>), emacs clean install (http://nic.ferrier.me.uk/blog/2012_07/emacs-packages-for-programmers)...

@nicolas_roche (https://twitter.com/nicolas_roche)

logo and the multiple suggestions regarding the web design part.

@nmassyl (<https://twitter.com/nmassyl>)

multiple exchanges on design and functionalities.

@purcell (<https://github.com/purcell>)

various discussions, suggestions regarding packaging on Melpa (<http://melpa.milkbox.net/>)

@puzan (<https://github.com/puzan>)

org-trello’s el-get recipe

and thanks to all those that opened issues (<https://github.com/org-trello/org-trello/issues>) or pull requests (<https://github.com/org-trello/org-trello/pulls>).

Also, thank you to the entire free-software community world-wide, including the creators and contributors of Emacs and org-mode.

8.2 Issue List

If you experience an issue while using ‘org-trello’, please first confirm that you have the newest version. If you have an old version, please upgrade to the newest version - your issue may already have been solved. You may display the version of your copy of ‘org-trello’ by typing `C-c o v` or `M-x org-trello-version`.

If you have the newest version, please search the issue list (<https://github.com/org-trello/org-trello/issues>) for issues similar to yours. If your issue already exists, please describe your experiences in the comments, if different, and try the advice offered there, if any.

If you don’t find an issue like yours, you should create a new issue.

You should include the following information in your issue entry:

- Your ‘org-trello’ version
- Your ‘org-mode’ version
- Your emacs version
- Your system type and OS version
- How you installed ‘org-trello’:
 - melpa
 - melpa-stable
 - el-get
 - tarball
 - git clone
 - other
- A clear, concise and complete description of the issue. Please do state the obvious.
- Supporting data:
 - A copy of any pertinent messages produced by ‘org-trello’ or Emacs
 - A copy of buffer data necessary to reproduce the issue. (Please avoid posting private data. Do not post your Trello.com or other login credentials.)
 - If the issue is with installation, include the ‘*Compile Log*’ buffer contents.

Please use GitHub’s markdown formatting to improve readability.

We may have questions about your issue or question if we don’t understand. You can help us to help you better and faster by being clear, concise and complete in your issue description.

8.2.1 Using ‘M-x org-trello-bug-report’

You may use the bug-report function of ‘org-trello’ to print some information about ‘org-trello’ to the ‘*Messages*’ buffer to copy into the issue entry. To print the bug-report data, type M-x org-trello-bug-report or C-c o B. Then open the ‘*Messages*’ buffer and copy the block of data it produced to paste into the issue on GitHub. The block of data will resemble:

```
System information:
- system-type: darwin
- locale-coding-system: utf-8-unix
- emacs-version: GNU Emacs 26.1
- org version: 9.2
- org-trello version: 0.8.0
- org-trello path: ~/.emacs.d/elpa/org-trello-20180331.631/org-trello.el
- request-backend: curl
- kill-whole-line: nil
```

If you type C-u C-c o B instead, ‘org-trello’ will open a new issue on GitHub for you to complete.

8.2.2 Using ‘orgtrello-log-trace’

To obtain a more verbose output in the **Message** buffer, you can put this snippet of code in a ‘*scratch*’ buffer.

```
(custom-set-variables '(orgtrello-log-level orgtrello-log-trace))
```

and evaluate it with M-x eval-buffer. Then, return to your ‘org-trello’ buffer and repeat the conditions that cause the issue. Copy the resulting detailed log messages into your bug-report.

8.3 Mailing List

This project has a mailing list at librelist.com (<http://librelist.com/browser/emacs.org.trello/>) for communication and community among its users and contributors. You may join the list by sending an email to:

- subscribe: emacs.org.trello [AT] librelist.com
- unsubscribe: emacs.org.trello-unsubscribe [AT] librelist.com

8.4 Release List and Notes

The release list (<https://github.com/org-trello/org-trello/releases>) of ‘org-trello’ is on GitHub.

The separate release-notes file ([release-notes.org](https://github.com/org-trello/org-trello/blob/master/release-notes.org)) records the primary changes in each release of ‘org-trello’. Please also see the commit history (<https://github.com/org-trello/org-trello/commits/master>) of the repository (<https://github.com/org-trello/org-trello>) on GitHub.

8.5 Compatibility with Emacs

‘org-trello’ has been tested with the following versions of Emacs and Operating Systems:

Version	OS	Status
24.3.1	Linux Mint 14	OK
24.3.1	Linux Mint 15 (ubuntu based)	OK
24.3.1	Ubuntu 13.04	OK
24.3.1	Ubuntu 13.10	OK
24.3.50.1	Linux Mint 16 (debian based)	OK
24.4.1	NixOS	OK

Note: We cannot test under MacOS X or MS windows so any feedback on those is welcome.

8.6 Continuous Integration Tests

‘org-trello’ uses Travis CI (<https://travis-ci.org/org-trello/org-trello>) for continuous integration testing.

The CI tests and installs:

Version	CI	Manual Test
24.1	Not tested	Not tested
24.2	Not tested	Not tested
24.3.1	OK	OK
24.3.50	OK	OK
24.4.1	OK	OK

Note: Any feedback regarding the untested versions is welcome.

8.7 Developer’s Conventions

This describes the current conventions for org-trello’s development.

8.7.1 Sources

The sources are split into ‘namespaces’ in the `src/` (`./src/`) folder. This is described in the Namespaces section below.

1. Conventions

As there exists no namespace in emacs-lisp, I use:

- convention in function names to determine the nature private/public
- splitted files that represents namespaces.

1. Rules

These conventions are enforced in org-trello:

- functions are prefixed with ‘orgtrello-<NAMESPACE-FILENAME>-<FUNCTION-NAME>’
- ‘<NAMESPACE-FILENAME>’ is the filename without its path nor its extension. For example, ‘src/buffer.el’ renders ‘buffer’
- ‘<FUNCTION-NAME>’ is an alphanumeric symbol with ‘-’ as separator. For example, ‘orgtrello-api-add-board’ is a public function which does create a request to add a board.
- private functions are prefixed with ‘--’. For example, ‘orgtrello-api--deal-with-optional-v’ which is a private utility function to help in creating api request.
- predicate functions are suffixed by ‘-p’. For example, ‘orgtrello-data-entity-card-p’ which checks if the parameter entity is a card or not.

Note: I adapted the code to abide by emacs-lisp’s conventions (https://www.gnu.org/software/emacs/manual/html_node/elisp/Coding-Conventions.html).

2. Exception

‘org-trello.el’ is the main namespace that declares the:

- interactive commands used throughout all of org-trello
- minor mode

Every exposed interactive command is named ‘org-trello-fn-name’.

2. Namespaces

The namespaces are in loading order:

Namespaces file	Description of the namespace
org-trello-log.el	Provide log facilities
org-trello-setup.el	Main variable definition that permits internal ... org-trello functions customization
org-trello-date.el	org-trello’s date manipulation
org-trello-hash.el	Hash-map manipulation utilities
org-trello-action.el	Higher-order functions helper
org-trello-data.el	Internal org-trello data manipulation
org-trello-entity.el	Entity (card/checklist/item) predicates
org-trello-cbx.el	Checkbox manipulation utilities
org-trello-api.el	Trello API abstraction DSL
org-trello-query.el	HTTP query utilities
org-trello-backend.el	Deals with trello requests
org-trello-proxy.el	Proxy utilities - Namespace in charge of dealing ... with the orchestration of trello requests
org-trello-buffer.el	Buffer manipulation functions
org-trello-input.el	Text input functions
org-trello-controller.el	Controller used by org-trello.el
org-trello-deferred.el	Deferred computation in org-trello
org-trello.el	Main information about org-trello (version, ... licence, deps, etc...) + org-trello ... minor mode definition which defines ... interactive commands and the mode
utilities.el	test utilities functions

3. Loading

Use the `load-org-trello.el` (`./load-org-trello.el`) file to load org-trello for development purposes and keep the emacs way of browsing source code (`‘M-.’`, `‘M-,’`).

Open the file and `‘M-x eval-buffer’`.

8.7.2 Makefile

The Makefile (`./Makefile`) is your ally for:

- package
- test
- release

1. Package

This packages all the *org-trello*.el* into a standard tar file.

```
make package
```

2. Test

```
make test
```

3. Install

To test that the package, once created, can be installed (using the repository to fetch the dependencies).

```
make install-file-with-deps-from-melpa
```

Note: This will trigger the installation from a local package ‘org-trello-<VERSION>.tar’. The installation is used with the dependencies fetched from melpa.

Note: These are the targets used by the CI (cf. .travis.yml (./travis.yml))

4. Full install testing

As we deploy in melpa, we can ensure that once delivered, the installation is ok using those targets.

```
make install-package-from-melpa
```

5. Release

The release process is done through 2 steps:

1. Self Pull Request from the feature branch inside master

```
make pr
```

Note: You need ‘hub’ installed for this target to work.

2. Then trigger release through the call to the release target from the Makefile:

```
make release
```

This will:

- fetch the latest modifications on your repository
- checkout the master branch
- fast-forward to the latest master commit
- tag the latest commit from master using the \$VERSION you submit to the script (defaulting to the version from the org-trello.el header)
- push the tag to the upstream branch repository
- trigger the package target from the Makefile (thus building a new package to the latest version)
- Then manual delivery of the tar to the github release page

Note:

- this is an orchestration of the release.sh (./release.sh) script
- the packaging for MELPA is automatically done from ‘org-trello/org-trello’ repository

Appendix A GNU General Public License

Version 3, 29 June 2007

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Preamble

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Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

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1. Source Code.

The “source code” for a work means the preferred form of the work for making modifications to it. “Object code” means any non-source form of a work.

A “Standard Interface” means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The “System Libraries” of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A “Major Component”, in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The “Corresponding Source” for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work’s System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

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Appendix C TODO Indices

This section contains the concepts, commands, functions and variables indices.

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