

graphviz-dot-mode Manual

edition 0.3.10.a
for graphviz-dot-mode version 0.3.10

graphviz-dot-mode by Pieter Pareit, et al.
manual by Daniel Birket

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This is the `graphviz-dot-mode` *Manual*, edition 0.3.10.a, by Daniel Birket, updated 10 July 2017, which describes how to install and use the Emacs package `graphviz-dot-mode`, version 0.3.10, released 25 May 2015, which was written by and Copyright © 2002-2015 Pieter Pareit, et al. (See <http://ppareit.github.io/graphviz-dot-mode/>)

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This manual is based upon the comments and doc strings in the `graphviz-dot-mode.el` source code, which begins with:

```
;;; graphviz-dot-mode.el --- Mode for the dot-language used by graphviz (att).█  
  
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;; Homepage: http://ppareit.github.com/graphviz-dot-mode/  
;; Created: 28 Oct 2002  
;; Last modified: 25 May 2015  
;; Version: 0.3.10  
;; Keywords: mode dot dot-language dotlanguage graphviz graphs att
```

1 Introduction

This manual describes how to install and use `graphviz-dot-mode`, an Emacs package for working with *Graphviz* DOT-format files. The features of this package help you to create `.dot` or `.gv` files containing syntax compatible with the separate *Graphviz* package and use *Graphviz* to convert these files to diagrams.

Graphviz is a set of open source graph visualization tools created by AT&T Labs Research. A *graph* is a way of representing information as a network of connected *nodes* (shapes) and *edges* (lines). *Graphviz* is documented at <http://graphviz.org>.

The powerful text editor, Emacs, was created in 1976 by Richard Stallman. It is highly customizable and has 40 years of other extensions. *GNU Emacs* is documented at <https://www.gnu.org/software/emacs/>. *XEmacs* is documented at <http://www.xemacs.org>.

2 Installing

This chapter describes how to install `graphviz-dot-mode`.

2.1 Recommended Installation

The recommended way to install the package `graphviz-dot-mode` is to use `package.el` and *M-x package-install*.

To install `graphviz-dot-mode`, first add the MELPA Stable archive to the list of archives used by `package.el` (if it is not already there) by adding the following lines to your `.emacs` or other Emacs startup file. Then restart Emacs.

```
(require 'package)
(add-to-list 'package-archives
             '("melpa-stable" . "https://stable.melpa.org/packages/"))

(package-initialize)
```

(For more detailed and comprehensive instructions about using MELPA, please see <https://melpa.org/#/getting-started>.)

After restarting Emacs, type the following to install `graphviz-dot-mode`.

M-x package-install RET graphviz-dot-mode RET.

When installed this way using the package manager, `graphviz-dot-mode` will be activated automatically for file names ending in either `.dot` or `.gv`.

2.2 Installing by Hand

You can manually download and install `graphviz-dot-mode`, but it is best to use the recommended method above if you don't already know how to manually install an Emacs program.

You may download `graphviz-dot-mode.el` from <http://ppareit.github.io/graphviz-dot-mode/> and follow the instructions that you find there.

2.3 Installing this Info Manual

This section describes how to install this manual so that it may be used from within Emacs using its `info` reader.

1. Obtain the file containing the info-format version of this manual, `graphviz-dot-mode.info.gz` (See <https://github.com/daniel-birket/graphviz-dot-mode>.)
2. In Emacs, use `C-h v Info-directory-listRET` to display the contents of the `Info-directory-list` variable. (This may be the same as the `INFOPATH` environment variable.)
3. Copy the `graphviz-dot-mode.info.gz` file to one of the directories in the `Info-directory-list` variable.
4. Use `install-info` to add an entry for the new `graphviz-dot-mode.info.gz` file into the `dir` file in the info directory where you copied the file.

5. In Emacs, use `C-h i d m graphviz-dot-mode RET` to display this help file.

The `Makefile` in the `texinfo` subdirectory of the GitHub archive at <https://github.com/daniel-birket/graphviz-dot-mode> includes an option to install the info file with `make install`. You must first modify the variables in the top of the `Makefile` to use the correct directories and files for your system.

You must install *GNU Texinfo v6.4* to use `install-info` or the `Makefile`.

3 Using graphviz-dot-mode

This chapter describes how to use `graphviz-dot-mode`.

3.1 Compiling & Viewing

This section describes how to use `compile` and `view` functions. See Section 4.1 [Compile & View Variables], page 7.

`C-c c` (`compile`)

This command compiles the current dot file visited by the *Emacs* buffer. The output file is in the same directory and has the extension determined by the variable `graphviz-dot-preview-extension`.

`C-x ‘` (`next-error`)

This command will jump to the location in the source file of the next error from the most recent compile. Use `C-c c` to compile first.

`C-c p` (`graphviz-dot-preview`)

This command compiles and then (if it compiled successfully) shows the output of the current dot file visited by the *Emacs* buffer, provided that *GNU Emacs* or *XEmacs* is running on a graphical display capable of displaying the graphic file output by `dot`.

See `image-file-name-extensions` in *GNU Emacs* or `image-formats-alist` in *XEmacs* to customize the graphic files that can be displayed.

`C-c v` (`graphviz-dot-view`)

This command invokes an external viewer specified by the variable `graphviz-dot-view-command`. If `graphviz-dot-view-edit-command` is `t`, you will be prompted to enter a new `graphviz-dot-view-command`. If `graphviz-dot-save-before-view` is `t`, the buffer is saved before the external viewer command is invoked.

(See <http://graphviz.org/content/resources> for a list of *Graphviz* viewers and editors.)

3.2 Editing

This section describes how to edit with `graphviz-dot-mode`. See Section 4.2 [Editing Variables], page 8.

3.2.1 Indenting

`C-M-q` (`graphviz-dot-indent-graph`)

This command will indent the graph, digraph, or subgraph at point and any subgraph within it.

`TAB` This key will automatically indent the line. It does not perform completion.

`M-j` (`comment-indent-newline`)

See Section 3.2.3 [Commenting], page 6,

RET (`electric-graphviz-dot-terminate-line`)

If the variable `graphviz-dot-auto-indent-on-newline` is `t`, RET will insert a newline and indent the next line.

{ (`electric-graphviz-dot-open-brace`)

If the variable `graphviz-dot-auto-indent-on-braces` is `t`, { will insert a {, newline and indent the next line.

} (`electric-graphviz-dot-close-brace`)

If the variable `graphviz-dot-auto-indent-on-braces` is `t`, } will insert a }, newline and indent the next line.

;
(`electric-graphviz-dot-semi`)

If the variable `graphviz-dot-auto-indent-on-semi` is `t`, ; will insert a ;, newline and indent the next line.

3.2.2 Completion

M-t (`graphviz-dot-complete-word`)

This command will complete the attribute or value keyword at point. If more than one completion is possible, a list is displayed in the minibuffer.

See Section 4.2.2 [Completion Variables], page 8,

3.2.3 Commenting

M-; (`comment-dwim`)

This command will perform the comment command you want (Do What I Mean). If the region is active and `transient-mark-mode` is on, it will comment the region, unless it only consists of comments, in which case it will un-comment the region. Else, if the current line is empty, it will insert a blank comment line, otherwise it will append a comment to the line and indent it.

Use *C-u M-;* to kill the comment on the current line.

C-x C-; (`comment-line`)

This command will comment or un-comment the current line.

M-j (`comment-indent-newline`)

This command will break line the at point and indent, continuing a comment if within one. This indents the body of the continued comment under the previous comment line.

C-c C-c (`comment-region`)

This command will comment-out the region.

You may also use *M-;* (`comment-dwim`) to comment the region if `'transient-mark-mode'` is on.

C-c C-u (`graphviz-dot-uncomment-region`)

This command will un-comment the region.

You may also use *C-u M-;* (`comment-dwim`) to un-comment the region if `'transient-mark-mode'` is on.

4 Customizing

This section describes the customizable variables of `graphviz-dot-mode`. You may customize variables by typing

M-x graphviz-dot-customize RET

This function invokes the Emacs customization facility to allow you to view and change the `graphviz-dot-mode` variables below.

4.1 Compile & View Variables

This section describes variables related to compiling and viewing. See Section 3.1 [Compiling & Viewing], page 5,

`graphviz-dot-dot-program`

string, default: “dot”

This variable determines the command name (and path, if necessary) used to invoke the *Graphviz* dot program. The `C-c c` (`compile`) function invokes this command.

`graphviz-dot-preview-extension`

string, default “png”

This variable determines the file extension used for the `C-c c` (`compile`) and `C-c p` (`graphviz-dot-preview`) functions. The format for the compile command is

```
dot -T<extension> <filename>.dot > <filename>.<extension>
```

`graphviz-dot-save-before-view`

boolean, default `t`

This variable controls whether the buffer will be saved to the visited file before the `C-c v` (`graphviz-dot-view`) function invokes the external dot-file viewer command. Set this boolean variable to `t` (true) or `nil` (false).

`graphviz-dot-view-command`

string, default: “doted %s”

This variable determines the command name (and path, if necessary) used to invoke an external dot-file viewer program. The `C-c v` (`graphviz-dot-view`) function invokes this command. The name of the file visited by the buffer will be substituted for `%s` in this string.

(See <http://graphviz.org/content/resources> for a list of *Graphviz* viewers and editors.)

`graphviz-dot-view-edit-command`

boolean, default: `nil`

This variable controls whether you will be prompted for the external dot-file viewer command name when you use `C-c v graphviz-dot-view`. Set this to `t` (true) to be prompted to edit the viewer command variable `graphviz-dot-view-command` every time you use `C-c v` or `nil` to avoid the prompt.

4.2 Editing Variables

This section describes variables related to editing. See Section 3.2 [Editing], page 5,

4.2.1 Indenting Variables

This subsection describes variables related to indenting.

`graphviz-dot-auto-indent-on-braces`

{ } boolean, default `nil`

This variable controls whether the functions `electric-graphviz-dot-open-brace` and `electric-graphviz-dot-close-brace` are called when `{` and `}` are typed. Set this boolean variable to `t` (true) or `nil` (false).

`graphviz-dot-auto-indent-on-newline`

boolean, default `t`

This variable controls whether the function `electric-graphviz-dot-terminate-line` is called when a line is terminated with a newline. Set this boolean variable to `t` (true) or `nil` (false).

`graphviz-dot-auto-indent-on-semi`

boolean, default `t`

This variable controls whether the function `electric-graphviz-dot-semi` is called when a semicolon `;` is typed. Set this boolean variable to `t` (true) or `nil` (false).

`graphviz-dot-indent-width`

integer, default: `default-tab-width`

This variable determines the indentation used in `graphviz-dot-mode` buffers.

4.2.2 Completion Variables

This subsection describes variables related to completion.

`graphviz-dot-delete-completions`

boolean, default: `nil`

This variable controls whether the completion buffer is automatically deleted when a key is pressed. Set this boolean variable to `t` (true) or `nil` (false).

`graphviz-dot-toggle-completions`

boolean, default: `nil`

This variable controls whether repeated use of `M-t graphviz-dot-complete-word` will toggle the display of possible completions in the minibuffer. If this variable is set to `nil`, when there are more than one possible completions, a buffer will display all completions. Set this boolean variable to `t` (true) or `nil` (false).

4.3 Keyword Variables

This section describes the variables containing DOT-language keywords, which may change if *Graphviz* is updated. You may update these variables after new releases of *Graphviz* from <http://www.graphviz.org/doc/schema/attributes.xml>.

graphviz-dot-attr-keywords

list of strings, default: (“graph” “digraph” . . .)

This variable holds a list of keywords for attribute names in a graph. This is used by the *M-t* auto completion function. The actual completion tables are built when the mode is loaded, so changes to this variable are not immediately visible.

graphviz-dot-value-keywords

list of strings, default: (“true” “false” . . .)

This variable holds a list of keywords for attribute values in a graph. This is used by the *M-t* auto completion function. The actual completion tables are built when the mode is loaded, so changes to this variable are not immediately visible.

4.4 Mode Hook

graphviz-dot-mode-hook

list of functions, default: nil

This variable determines which functions are called when **graphviz-dot-mode** starts. To use it, add a line like below to your `.emacs` or other startup file.

```
(add-hook 'graphviz-dot-mode-hook 'my-hook)
```

5 Credits

`graphviz-dot-mode` was written by:

- Pieter Pareit pieter.pareit@gmail.com
- Rubens Ramos rubensr@users.sourceforge.net
- Eric Anderson <http://www.ece.cmu.edu/~andersoe/>

Other contributors are noted in the version history in the `graphviz-dot-mode.el` file and the commit history on GitHub.

The source code is maintained on GitHub at <https://github.com/ppareit/graphviz-dot-mode> by Pieter Pareit (pieter.pareit@gmail.com). Please email software comments, suggestions and corrections there.

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