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🚦 Cross Reference Back-End Capabilities 🚧

Σ Xref Back-end ➡ / Feature ⇓ Last updated on:	elisp 2026-02-03	etags (pure etags or Universal -CTags with etags format)	cscope	GNU global gtags with support from Universal-Ctags and Pygments	gxref	xref with Universal-CTags	RTags	dumb-jump

Uses external shell program?	**No**.
	• Internal to Emacs.
	• Uses elisp-mode.el
		Yes: etags or ctags (Universal-CTags)
		• To create the TAGS file
			Yes.
			• To create cscope.files and cscope.out files, the list of files to index and the index database.
								Yes. Configurable:
								• ag
								• rg
								• git-grep
								• grep
								  • BSD grep
								  • GNU grep

Emacs command to run the external command?			Yes:					No, the external shell command is generated internally by dumb-jump commands.
Tags-based?	No		No	No				No
Can use Tags?			No					No
Requires interpretation/load of examined source code?	**Yes**. Only able to detect identifiers that have already been defined from .el files that have been loaded.		No					No. The search tool searches inside the file system.
(can) use external database file(s)?	No		Yes - requires it	Yes				No
Support multiple definitions in code	Yes, Honours xref front-end selection.		Yes					Yes. Can be used with or without xref. Provides menu selection in case of several finds.
Support list the use of identifier			Yes					
Support multiple directory trees of source code?	Yes: the etags command must be given files from several directory trees with their full pathnames to get these paths in the TAGS file.		No? (I have not find how, 🚧need to investigate the idea of symlinks and file list) .	• Yes but they have to all be under the same root! • One way around this is to use the —file option and symlinks: 1. create symlinks to the external into the directory where the GTAGS files will be created. 2. Use find or fd to create a **listfile** of all files you need to parse. 3. Inside that generated **listfile** replace the path of files in external directories with the path using the symlinks. 4. Execute gtags —file **listfile**				Yes, but this must be configured inside a dumb-jump specific configuration file located in the directory identified as the "*project*" directory.
Support compressed archives?	Yes	Yes, etags process .gz files and list the file name without the .gz extension. This way, generated TAGS can work even if a file was compressed or de-compressed after the creation of the TAGS file, as long as the emacs code that handles the TAGS file is able to detect the .gz file even if the reference is the name of the uncompressed file. • Emacs 25, 26 and 27.1 xref-etags-backend fails (see **GNU bug report #44494**. • PEL has a work-around for this bug.	No? (I have not found how)	**No**, gtags has no option to handle compressed files like .gz files. Work-around: decompress all files before running gtags. For example, using fd, rags and gunzip, keeping the .gz files: fd -e .gz --print0 | xargs -0 gunzip -k				Yes. Depending of the search tool used.
Automatically activates mode when opening a file via an cross-reference		Not natively, but hooks for major mode canoe set. PEL can do that.		Yes, seems to work.				No necessary.

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Supported Programming Languages	Emacs Lisp		• C (CC-mode) • C++ partly (old - 2012) • Java partly (old - 2012)	A very large set, including all languages PEL supports. Global has direct support for some but it also uses Universal CTags and Pygments to help it include support for more.				A large collection. Over 60.
Support moving point to definition	**Yes** • **`M-.`**		**Yes** • with xcscope: **`C-c s d`** • with helm-cscope: **`M-.`**	**Yes** • **`M-.`**				**Yes** 2 sets of bindings available: dumb-jump itself: **`✱ <f7> j M->`** And when dumb-jump is used as a xref back-end: **`• M-.`**
Support finding all callers of a function	**Yes** • **`M-?`**		Yes	**Yes** • **`M-?`**				**Yes** • **`M-?`**
Support finding all function called by a function			Yes					
Support finding all assignment to a symbol			Yes					
Support finding #include files (C, C++)			Yes					No
Has command to refresh tags/ database file(s)			Yes					N/A
Support automatic refresh of tags/ database file(s)			No					N/A
Loads tags/ database file inside Emacs to use			No					No
PEL shell file to create the TAGS/ database file(s)	• ~/bin/tags-for-pel • ~/bin/etags-el		None for the moment					
Support finding use of identifiers?	Yes, with M-? But it uses find and grep: it is slow.		Yes					
Emacs package support it			• xcscope • helm-cscope					
Support showing results in helm buffer?			Yes, only some commands with helm-cscope					Yes
Support showing results in ivy list			No					Yes