

ABSTRACT

The package crefthe provides a command `\crefthe` parallel to cleveref's `\cref` for handling definite articles properly (especially for the article contractions in some European languages).

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The motivation

- 1 By default, with cleveref's `\cref` to reference theorem-like environments, the names do not
2 contain definite articles. While this might be acceptable for English, it is certainly not good
3 enough for languages such as French, Italian, Portuguese, Spanish, etc. – in these cases there
4 shall be grammatical errors and would give you a strong feeling that it is machine-generated.
5 However, even if we manually add the definite articles to the names, there would still be
6 other problems. As an example, if we define the French names to be:

```
\crefname{theorem}{le théorème}{les théorèmes}  
\crefname{proposition}{la proposition}{les propositions}
```

- 7 then when one writes (which means “*We can deduce this from ...*”)

```
On peut le déduire de \cref{thm1,thm2,prop3}.
```

- 8 the result would be:

On peut le déduire **de les** théorèmes 1 et 2 et **la** proposition 3.

- 9 which is wrong, as the correct result should be:

On peut le déduire **des** théorèmes 1 et 2 et **de la** proposition 3.

- 10 `\cref` cannot handle such cases automatically — that is when `\crefthe` comes into play.

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The usage

2.1 | How to load it?

- 11 Simply load the package with:

```
\usepackage{crefthe}
```

TIP

- Since `crefthe` uses `cleveref` internally, it should usually be placed at the last of your preamble, and notably, after `varioref` and `hyperref`.
- To handle article contractions correctly, `\crefthe` shall detect the current language, thus you need to use packages such as `babel` or `polyglossia` to set your languages, and use commands like `\selectlanguage` to select them appropriately.

2.2 | How to use it ?

Before everything, you need to define the names, which can be done with `\crefthename`. Its syntax is similar to `\crefname`, but now you can specify the definite articles, for example:

```
\crefthename{theorem}[le]{théorème}[les]{théorèmes}
```

Then you can use the command `\crefthe` as follows:

- `\crefthe[⟨prep⟩]{⟨labels⟩}`
 - This will pass the preposition `⟨prep⟩` to the definite articles that follows. Its behavior depends on the current language (for example, in Spanish, `⟨prep⟩` is passed only to the first definite article, while in French it is passed to everyone).
- `\crefthe- [⟨prep⟩]{⟨labels⟩}` and `\crefthe+ [⟨prep⟩]{⟨labels⟩}`
 - In case the automatic version does not meet your needs, here are two manual ones. The `-` version passes the preposition `⟨prep⟩` only to the first definite article, while the `+` version passes `⟨prep⟩` to every definite article.

TIP

There is also a starred version `\crefthe*` for generating the same referencing text but without creating hyperlinks.

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Example

Let us come back to the example at the beginning, now you can do this:

```
\crefthename{theorem}[le]{théorème}[les]{théorèmes}
\crefthename{proposition}[la]{proposition}[les]{propositions}
```

And the sentence shall be written as:

```
On peut le déduire \crefthe[de]{thm1,thm2,prop3}.
```

which would result in (provided that you have done `\selectlanguage{french}`):

On peut le déduire **des** théorèmes 1 et 2 et **de la** proposition 3.

Voilà !

Regarding the cases

1 The commands also have corresponding uppercased version: `\Crefthename` and `\Crefthe`,
 2 similar to `cleveref`'s `\Crefname` and `\Cref`, reserved for use at the beginning of a sentence.
 3 `\Crefthe` can handle case changing automatically: for example, with `\Crefthe [À] {thm1 ,`
 4 `thm2,prop3}`, you will get something like

Aux théorèmes 1 et 2 et à la proposition 3

5 Of course you will have to define the `\Crefthenames` separately, for example as:

```
\Crefthename{theorem}[Le]{théorème}[Les]{théorèmes}
\Crefthename{proposition}[La]{proposition}[Les]{propositions}
```

Relationship with cleveref

6 `crefthe` loads `cleveref` automatically and pass all the options to it. All its commands, used
 7 without optional arguments, degenerate to those in `cleveref`. For example, `\crefthe{...}`
 8 is the same as `\cref{...}`, and `\crefthename` is the same as `\crefname` if the definite
 9 articles are not specified. That said, you can safely use the command `\crefthe` everywhere
 10 in your document without causing extra trouble.

11 With the option `overwrite`, user commands in `cleveref` will be replaced by those offered
 12 here, thus you can simply write `\cref` for `\crefthe` – and similarly for `\Cref`, `\crefname`
 13 and `\Crefname`.

For multi-language documents

14 To place hyperlinks at the right place, `\crefthename` touches the corresponding `\crefformat`
 15 internally, which makes the format language-dependent. If you are writing multi-language
 16 documents, you may consider putting `\crefthename` inside your language configuration
 17 so as to reset it each time you select a new language.

Known issues

- 18 • `crefthe` currently works for French, Italian, Portuguese (European and Brazilian) and
 19 Spanish, certainly more would be added to this list.
- 20 • The current mechanism does not work for German. The author plans to adopt a more
 21 refined approach in later versions in order to support the various situations in German.
- 22 • For now, the automatic case changing mechanism only works properly under Unicode
 23 based engines. If you are using pdfL^AT_EX or typing accented letters with text commands,
 24 `\Crefthe` may not work as expected.
- 25 • The names of theorem-like environments are not provided — for the moment you need
 26 to define them all by yourself. However, users are encouraged to use the ProjLib toolkit,
 27 which already handles everything for you.