# coccigrep Documentation

***Release 1.8***

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ONE

# INTRODUCTION

coccigrep provides an abstraction for running spatch in the scope of searching for information in C source code.

There is two interesting classes:

- `coccigrep.CocciGrep`: main class that run the intensive task
- `coccigrep.CocciGrepConfig`: used to parse and get configuration value

To build a request:

- Create a `coccigrep.CocciGrep` instance
- Call `coccigrep.CocciGrep.setup()` function to setup the search
- Call `coccigrep.CocciGrep.run()` function to execute the search
- Call `coccigrep.CocciGrep.display()` function to display the output of the search

CHAPTER

TWO

# DOCUMENTATION OF MODULE

**exception** coccigrep.**CocciConfigException**(*value*)
Exception raised when configuration parameter are not correct.

For example, it is returned if spatch command can not be found.

**exception** coccigrep.**CocciException**(*value*)
Generic class for coccigrep exception

**class** coccigrep.**CocciGrep**
Core class of the module: setup and run.

This class is the core of the module. It is responsible of initialisation and running of the request.

**add_operations**(*new_ops*)
Add operation to the list of supported operations

**Parameters** **new_ops** (*list of str*) – list of filenames (ending by .cocci)

**add_options**(*olist*)
Add option to spatch command

**Parameters** **olist** (*list of str*) – List of options

**cocci_python = '\n\n@ script:python @\np1 << init.p1;\n@@\n\nfor p in p1:\n print "%s:%s:%s:%s:%s" % (p.file,p**

**display**(*mode='raw'*, *before=0*, *after=0*, *oformat='term'*)
Display output for complete request

**Parameters**

- **mode** (*str*) – display mode
- **before** (*int*) – number of lines to display before match
- **after** (*int*) – number of lines to display after match
- **oformat** (*str*) – format of output for color (term, html)

**Returns** the result of the search as a str

**get_datadir**()

**get_operation_info**(*op*)

**get_operation_name**(*fname*)

**get_operations**()
Get list of available operations

**Returns** list of operations in a list of str

**run** (*files*)
Run the search against the files and directories given in argument

This function is doing the main job. It will run spatch with the correct parameters by using subprocess or it will use multiprocessing if a concurrency level greater than 1 has been asked.

**Parameters** **args** (*list of str*) – list of filenames and directory names

**Raise** CocciRunException or CocciConfigException

**set_concurrency** (*ncpus*)
Set concurrency level (number of spatch command to run in parallel)

**Parameters** **ncpus** (*int*) – number of process to launch in parallel

**set_cpp** ()
Activate coccinelle C++ support

**set_spatch_cmd** (*cmd*)
Set path or command name for spatch

**Parameters** **cmd** (*str*) – Name of parth of the spatch command

**set_verbose** ()
Activate verbose mode

**setup** (*stype*, *attribute*, *operation*)

**Parameters**

- **stype** (*str*) – structure name, used to replace '$type' in the cocci file
- **attribute** (*str*) – basically attribute of the structure, used to replace '$attribute' in the cocci file
- **operation** (*str*) – search operation to do

**Raise** CocciRunException

**spatch = 'spatch'**

**class** coccigrep.**CocciGrepConfig**
Configuration handling class

This class parses configuration and can be used to access to configuration item via get operations. CocciGrepConfig is derived from SafeConfigParser

**class** coccigrep.**CocciMatch** (*mfile*, *mline*, *mcol*, *mlineend*, *mcolend*)
Store a match and take care of its display

**display** (*stype*, *mode='raw'*, *oformat='term'*)
Display output for a single match

**Parameters**

- **stype** (*str*) – name of the matched type
- **mode** (*str*) – display mode
- **oformat** (*str*) – format of output for color (term, html)

**Returns** a human readable string containing the result of the search (matched line, context, file name, etc.)

**ptype_regexp = <_sre.SRE_Pattern object at 0x374a030>**

**class** coccigrep.**CocciPatch**(*filename*)
Class used to store information about a patch.

This class is iterable and can be used as a dictionnary.

**comment = <_sre.SRE_Pattern object at 0x31e5cf0>**

**keywords = ['Name', 'Author', 'Desc', 'Confidence', 'File', 'Revision', 'Arguments']**

**class** coccigrep.**CocciProcess**(*cmd*, *verbose*)
Class used for running spatch command in the case of multiprocessing

**execute**(*option=''*)

**join**()

**recv**()

**start**()

**exception** coccigrep.**CocciRunException**(*value*)
Exception raised when running parameters are not correct.

For example, it is returned if a required argument is missing.

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THREE

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