

NAME

PCRE2 - Perl-compatible regular expressions (revised API)

SYNOPSIS

```
#include <pcre2.h>
```

```
int pcre2_dfa_match(const pcre2_code *code, PCRE2_SPTR subject,
    PCRE2_SIZE length, PCRE2_SIZE startoffset,
    uint32_t options, pcre2_match_data *match_data,
    pcre2_match_context *mcontext,
    int *workspace, PCRE2_SIZE wscount);
```

DESCRIPTION

This function matches a compiled regular expression against a given subject string, using an alternative matching algorithm that scans the subject string just once (except when processing lookaround assertions). This function is *not* Perl-compatible (the Perl-compatible matching function is `pcre2_match()`). The arguments for this function are:

code Points to the compiled pattern
subject Points to the subject string
length Length of the subject string
startoffset Offset in the subject at which to start matching
options Option bits
match_data Points to a match data block, for results
mcontext Points to a match context, or is NULL
workspace Points to a vector of ints used as working space
wscount Number of elements in the vector

The size of output vector needed to contain all the results depends on the number of simultaneous matches, not on the number of parentheses in the pattern. Using `pcre2_match_data_create_from_pattern()` to create the match data block is therefore not advisable when using this function.

A match context is needed only if you want to set up a callout function or specify the heap limit or the match or the recursion depth limits. The *length* and *startoffset* values are code units, not characters. The options are:

PCRE2_ANCHORED Match only at the first position
PCRE2_COPY_MATCHED_SUBJECT
 On success, make a private subject copy

PCRE2_ENDANCHORED Pattern can match only at end of subject
PCRE2_NOTBOL Subject is not the beginning of a line
PCRE2_NOTEOL Subject is not the end of a line
PCRE2_NOTEMPTY An empty string is not a valid match
PCRE2_NOTEMPTY_ATSTART An empty string at the start of the subject
 is not a valid match
PCRE2_NO_UTF_CHECK Do not check the subject for UTF
 validity (only relevant if PCRE2_UTF
 was set at compile time)
PCRE2_PARTIAL_HARD Return PCRE2_ERROR_PARTIAL for a partial
 match even if there is a full match
PCRE2_PARTIAL_SOFT Return PCRE2_ERROR_PARTIAL for a partial
 match if no full matches are found
PCRE2_DFA_RESTART Restart after a partial match
PCRE2_DFA_SHORTEST Return only the shortest match

There are restrictions on what may appear in a pattern when using this matching function. Details are given in the **pcre2matching** documentation. For details of partial matching, see the **pcre2partial** page. There is a complete description of the PCRE2 native API in the **pcre2api** page and a description of the POSIX API in the **pcre2posix** page.