

**NAME**

`ares_search` – Initiate a DNS query with domain search

**SYNOPSIS**

```
#include <ares.h>

typedef void (*ares_callback)(void *arg, int status,
int timeouts, unsigned char *abuf, int alen)

void ares_search(ares_channel channel, const char *name,
int dnsclass, int type, ares_callback callback,
void *arg)
```

**DESCRIPTION**

The **ares\_search** function initiates a series of single-question DNS queries on the name service channel identified by *channel*, using the channel's search domains as well as a host alias file given by the HOSTALIASES environment variable. The parameter *name* gives the alias name or the base of the query name as a NUL-terminated C string of period-separated labels; if it ends with a period, the channel's search domains will not be used. Periods and backslashes within a label must be escaped with a backslash. The parameters *dnsclass* and *type* give the class and type of the query using the values defined in `<arpa/nameser.h>`. When the query sequence is complete or has failed, the ares library will invoke *callback*. Completion or failure of the query sequence may happen immediately, or may happen during a later call to **ares\_process(3)** or **ares\_destroy(3)**.

The callback argument *arg* is copied from the **ares\_search** argument *arg*. The callback argument *status* indicates whether the query sequence ended with a successful query and, if not, how the query sequence failed. It may have any of the following values:

- ARES\_SUCCESS**     A query completed successfully.
- ARES\_ENODATA**     No query completed successfully; when the query was tried without a search domain appended, a response was returned with no answers.
- ARES\_EFORMERR**    A query completed but the server claimed that the query was malformed.
- ARES\_ESERVFAIL**   No query completed successfully; when the query was tried without a search domain appended, the server claimed to have experienced a failure. (This code can only occur if the **ARES\_FLAG\_NOCHECKRESP** flag was specified at channel initialization time; otherwise, such responses are ignored at the **ares\_send(3)** level.)
- ARES\_ENOTFOUND**   No query completed successfully; when the query was tried without a search domain appended, the server reported that the queried-for domain name was not found.
- ARES\_ENOTIMP**     A query completed but the server does not implement the operation requested by the query. (This code can only occur if the **ARES\_FLAG\_NOCHECKRESP** flag was specified at channel initialization time; otherwise, such responses are ignored at the **ares\_send(3)** level.)
- ARES\_EREFOUSED**   A query completed but the server refused the query. (This code can only occur returned if the **ARES\_FLAG\_NOCHECKRESP** flag was specified at channel initialization time; otherwise, such responses are ignored at the **ares\_send(3)** level.)
- ARES\_TIMEOUT**     No name servers responded to a query within the timeout period.
- ARES\_ECONNREFUSED**   No name servers could be contacted.
- ARES\_ENOMEM**     Memory was exhausted.
- ARES\_EDESTRUCTION**   The name service channel *channel* is being destroyed; the query will not be completed.

The callback argument *timeouts* reports how many times a query timed out during the execution of the given request.

If a query completed successfully, the callback argument *abuf* points to a result buffer of length *alen*. If the query did not complete successfully, *abuf* will usually be NULL and *alen* will usually be 0, but in some cases an unsuccessful query result may be placed in *abuf*.

**SEE ALSO**

**ares\_process(3)**

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