

# **1 APR::Status - Perl Interface to the APR\_STATUS\_IS\_\* macros**

## 1.1 Synopsis

```
use APR::Status ();
eval { $obj->mp_method() };
if ($@ && $ref $@ eq 'APR::Error' && APR::Status::is_EAGAIN($@)) {
    # APR_STATUS_IS_EAGAIN(s) of apr_errno.h is satisfied
}
```

## 1.2 Description

An interface to *apr\_errno.h* composite error codes.

As discussed in the `APR::Error` manpage, it is possible to handle APR/Apache/mod\_perl exceptions in the following way:

```
eval { $obj->mp_method() };
if ($@ && $ref $@ eq 'APR::Error' && $@ == $some_code)
    warn "handled exception: $@";
}
```

However, in cases where `$some_code` is an `APR::Const` constant, there may be more than one condition satisfying the intent of this exception. For this purpose the APR C library provides in *apr\_errno.h* a series of macros, `APR_STATUS_IS_*`, which are the recommended way to check for such conditions. For example, the `APR_STATUS_IS_EAGAIN` macro is defined as

```
#define APR_STATUS_IS_EAGAIN(s)          ((s) == APR_EAGAIN \
    || (s) == APR_OS_START_SYSERR + ERROR_NO_DATA \
    || (s) == APR_OS_START_SYSERR + SOCEWOULDBLOCK \
    || (s) == APR_OS_START_SYSERR + ERROR_LOCK_VIOLATION)
```

The purpose of `APR::Status` is to provide functions corresponding to these macros.

## 1.3 Functions

### 1.3.1 *is\_EACCES*

Check if the error is matching `EACCES` and its variants (corresponds to the `APR_STATUS_IS_EACCES` macro).

```
$status = APR::Status::is_EACCES($error_code);
```

- **arg1: `$error_code` (integer or `APR::Error` object)**

The error code or to check, normally `$@` blessed into `APR::Error` object.

- **ret: `$status` (boolean)**
- **since: 2.0.00**

An example of using `is_EACCESS` is when reading the contents of a file where access may be forbidden:

```
eval { $obj->slurp_filename(0) };
if ($@) {
    return Apache2::Const::FORBIDDEN
        if ref $@ eq 'APR::Error' && APR::Status::is_EACCESS($@);
    die $@;
}
```

Due to possible variants in conditions matching `EACCESS`, the use of this function is recommended for checking error codes against this value, rather than just using `APR::Const::EACCESS` directly.

### 1.3.2 *is\_EAGAIN*

Check if the error is matching `EAGAIN` and its variants (corresponds to the `APR_STATUS_IS_EAGAIN` macro).

```
$status = APR::Status::is_EAGAIN($error_code);
```

- **arg1: \$error\_code (integer or APR::Error object)**

The error code or to check, normally `$@` blessed into `APR::Error` object.

- **ret: \$status (boolean)**
- **since: 2.0.00**

For example, here is how you may want to handle socket read exceptions and do retries:

```
use APR::Status ();
# ....
my $tries = 0;
my $buffer;
RETRY: my $rlen = eval { $socket->recv($buffer, SIZE) };
if ($@ && ref($@) && APR::Status::is_EAGAIN($@) {
    if ($tries++ < 3) {
        goto RETRY;
    }
    else {
        # do something else
    }
}
else {
    die "eval block has failed: $@";
}
```

Notice that just checking against `APR::Const::EAGAIN` may work on some Unices, but then it will certainly break on win32. Therefore make sure to use this macro and not `APR::Const::EAGAIN` unless you know what you are doing.

### 1.3.3 *is\_ENOENT*

Check if the error is matching ENOENT and its variants (corresponds to the APR\_STATUS\_IS\_ENOENT macro).

```
$status = APR::Status::is_ENOENT($error_code);
```

- **arg1: \$error\_code (integer or APR::Error object)**

The error code or to check, normally \$@ blessed into APR::Error object.

- **ret: \$status (boolean)**
- **since: 2.0.00**

An example of using is\_ENOENT is when reading the contents of a file which may not exist:

```
eval { $obj->slurp_filename(0) };
if ($@) {
    return Apache2::Const::NOT_FOUND
        if ref $@ eq 'APR::Error' && APR::Status::is_ENOENT($@);
    die $@;
}
```

Due to possible variants in conditions matching ENOENT, the use of this function is recommended for checking error codes against this value, rather than just using APR::Const::ENOENT directly.

### 1.3.4 *is\_EOF*

Check if the error is matching EOF and its variants (corresponds to the APR\_STATUS\_IS\_EOF macro).

```
$status = APR::Status::is_EOF($error_code);
```

- **arg1: \$error\_code (integer or APR::Error object)**

The error code or to check, normally \$@ blessed into APR::Error object.

- **ret: \$status (boolean)**
- **since: 2.0.00**

Due to possible variants in conditions matching EOF, the use of this function is recommended for checking error codes against this value, rather than just using APR::Const::EOF directly.

### 1.3.5 *is\_ECONNABORTED*

Check if the error is matching ECONNABORTED and its variants (corresponds to the APR\_STATUS\_IS\_ECONNABORTED macro).

```
$status = APR::Status::is_ECONNABORTED($error_code);
```

- **arg1: \$error\_code (integer or APR::Error object)**

The error code or to check, normally \$@ blessed into APR::Error object.

- **ret: \$status (boolean)**
- **since: 2.0.00**

Due to possible variants in conditions matching ECONNABORTED, the use of this function is recommended for checking error codes against this value, rather than just using APR::Const::ECONNABORTED directly.

### 1.3.6 *is\_ECONNRESET*

Check if the error is matching ECONNRESET and its variants (corresponds to the APR\_STATUS\_IS\_ECONNRESET macro).

```
$status = APR::Status::is_ECONNRESET($error_code);
```

- **arg1: \$error\_code (integer or APR::Error object)**

The error code or to check, normally \$@ blessed into APR::Error object.

- **ret: \$status (boolean)**
- **since: 2.0.00**

Due to possible variants in conditions matching ECONNRESET, the use of this function is recommended for checking error codes against this value, rather than just using APR::Const::ECONNRESET directly.

### 1.3.7 *is\_TIMEUP*

Check if the error is matching TIMEUP and its variants (corresponds to the APR\_STATUS\_IS\_TIMEUP macro).

```
$status = APR::Status::is_TIMEUP($error_code);
```

- **arg1: \$error\_code (integer or APR::Error object)**

The error code or to check, normally \$@ blessed into APR::Error object.

- **ret: \$status (boolean)**
- **since: 2.0.00**

Due to possible variants in conditions matching TIMEUP, the use of this function is recommended for checking error codes against this value, rather than just using APR::Const::TIMEUP directly.

## **1.4 See Also**

mod\_perl 2.0 documentation.

## **1.5 Copyright**

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## **1.6 Authors**

The mod\_perl development team and numerous contributors.

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