

NAME

CGI::Cookie - Interface to Netscape Cookies

SYNOPSIS

```
use CGI qw/:standard/;
use CGI::Cookie;

# Create new cookies and send them
$cookie1 = new CGI::Cookie(-name=>'ID',-value=>123456);
$cookie2 = new CGI::Cookie(-name=>'preferences',
                           -value=>{ font => Helvetica,
                                     size => 12 }
                           );
print header(-cookie=>[$cookie1,$cookie2]);

# fetch existing cookies
%cookies = fetch CGI::Cookie;
$id = $cookies{'ID'}->value;

# create cookies returned from an external source
%cookies = parse CGI::Cookie($ENV{COOKIE});
```

DESCRIPTION

CGI::Cookie is an interface to Netscape (HTTP/1.1) cookies, an innovation that allows Web servers to store persistent information on the browser's side of the connection. Although CGI::Cookie is intended to be used in conjunction with CGI.pm (and is in fact used by it internally), you can use this module independently.

For full information on cookies see

<http://www.ics.uci.edu/pub/ietf/http/rfc2109.txt>

USING CGI::Cookie

CGI::Cookie is object oriented. Each cookie object has a name and a value. The name is any scalar value. The value is any scalar or array value (associative arrays are also allowed). Cookies also have several optional attributes, including:

1. expiration date

The expiration date tells the browser how long to hang on to the cookie. If the cookie specifies an expiration date in the future, the browser will store the cookie information in a disk file and return it to the server every time the user reconnects (until the expiration date is reached). If the cookie species an expiration date in the past, the browser will remove the cookie from the disk file. If the expiration date is not specified, the cookie will persist only until the user quits the browser.

2. domain

This is a partial or complete domain name for which the cookie is valid. The browser will return the cookie to any host that matches the partial domain name. For example, if you specify a domain name of ".capricorn.com", then Netscape will return the cookie to Web servers running on any of the machines "www.capricorn.com", "ftp.capricorn.com", "feckless.capricorn.com", etc. Domain names must contain at least two periods to prevent attempts to match on top level domains like ".edu". If no domain is specified, then the browser will only return the cookie to servers on the host the cookie originated from.

3. path

If you provide a cookie path attribute, the browser will check it against your script's URL before returning the cookie. For example, if you specify the path `"/cgi-bin"`, then the cookie will be returned to each of the scripts `"/cgi-bin/tally.pl"`, `"/cgi-bin/order.pl"`, and `"/cgi-bin/customer_service/complain.pl"`, but not to the script `"/cgi-private/site_admin.pl"`. By default, the path is set to `"/"`, so that all scripts at your site will receive the cookie.

4. secure flag

If the `"secure"` attribute is set, the cookie will only be sent to your script if the CGI request is occurring on a secure channel, such as SSL.

4. httponly flag

If the `"httponly"` attribute is set, the cookie will only be accessible through HTTP Requests. This cookie will be inaccessible via JavaScript (to prevent XSS attacks).

But, currently this feature only used and recognised by MS Internet Explorer 6 Service Pack 1 and later.

See this URL for more information:

<http://msdn.microsoft.com/en-us/library/ms533046%28VS.85%29.aspx>

Creating New Cookies

```
my $c = new CGI::Cookie(-name    => 'foo',
                        -value    => 'bar',
                        -expires  => '+3M',
                        -domain   => '.capricorn.com',
                        -path     => '/cgi-bin/database',
                        -secure   => 1
                      );
```

Create cookies from scratch with the **new** method. The **-name** and **-value** parameters are required. The name must be a scalar value. The value can be a scalar, an array reference, or a hash reference. (At some point in the future cookies will support one of the Perl object serialization protocols for full generality).

-expires accepts any of the relative or absolute date formats recognized by CGI.pm, for example `" +3M "` for three months in the future. See CGI.pm's documentation for details.

-domain points to a domain name or to a fully qualified host name. If not specified, the cookie will be returned only to the Web server that created it.

-path points to a partial URL on the current server. The cookie will be returned to all URLs beginning with the specified path. If not specified, it defaults to `"/"`, which returns the cookie to all pages at your site.

-secure if set to a true value instructs the browser to return the cookie only when a cryptographic protocol is in use.

-httponly if set to a true value, the cookie will not be accessible via JavaScript.

For compatibility with Apache::Cookie, you may optionally pass in a `mod_perl` request object as the first argument to `new()`. It will simply be ignored:

```
my $c = new CGI::Cookie($r,
                        -name    => 'foo',
                        -value    => ['bar', 'baz']);
```

Sending the Cookie to the Browser

The simplest way to send a cookie to the browser is by calling the `bake()` method:

```
$c->bake;
```

Under `mod_perl`, pass in an Apache request object:

```
$c->bake($r);
```

If you want to set the cookie yourself, Within a CGI script you can send a cookie to the browser by creating one or more `Set-Cookie:` fields in the HTTP header. Here is a typical sequence:

```
my $c = new CGI::Cookie(-name    => 'foo',
                        -value    => ['bar','baz'],
                        -expires => '+3M');

print "Set-Cookie: $c\n";
print "Content-Type: text/html\n\n";
```

To send more than one cookie, create several `Set-Cookie:` fields.

If you are using `CGI.pm`, you send cookies by providing a `-cookie` argument to the `header()` method:

```
print header(-cookie=>$c);
```

`Mod_perl` users can set cookies using the request object's `header_out()` method:

```
$r->headers_out->set('Set-Cookie' => $c);
```

Internally, `Cookie` overloads the `""` operator to call its `as_string()` method when incorporated into the HTTP header. `as_string()` turns the `Cookie`'s internal representation into an RFC-compliant text representation. You may call `as_string()` yourself if you prefer:

```
print "Set-Cookie: ", $c->as_string, "\n";
```

Recovering Previous Cookies

```
%cookies = fetch CGI::Cookie;
```

fetch returns an associative array consisting of all cookies returned by the browser. The keys of the array are the cookie names. You can iterate through the cookies this way:

```
%cookies = fetch CGI::Cookie;
foreach (keys %cookies) {
    do_something($cookies{$_});
}
```

In a scalar context, `fetch()` returns a hash reference, which may be more efficient if you are manipulating multiple cookies.

`CGI.pm` uses the URL escaping methods to save and restore reserved characters in its cookies. If you are trying to retrieve a cookie set by a foreign server, this escaping method may trip you up. Use `raw_fetch()` instead, which has the same semantics as `fetch()`, but performs no unescaping.

You may also retrieve cookies that were stored in some external form using the `parse()` class method:

```
$COOKIES = `cat /usr/tmp/Cookie_stash`;
```

```
%cookies = parse CGI::Cookie($COOKIES);
```

If you are in a `mod_perl` environment, you can save some overhead by passing the request object to `fetch()` like this:

```
CGI::Cookie->fetch($r);
```

Manipulating Cookies

Cookie objects have a series of accessor methods to get and set cookie attributes. Each accessor has a similar syntax. Called without arguments, the accessor returns the current value of the attribute. Called with an argument, the accessor changes the attribute and returns its new value.

name()

Get or set the cookie's name. Example:

```
$name = $c->name;
$new_name = $c->name('fred');
```

value()

Get or set the cookie's value. Example:

```
$value = $c->value;
@new_value = $c->value(['a','b','c','d']);
```

value() is context sensitive. In a list context it will return the current value of the cookie as an array. In a scalar context it will return the **first** value of a multivalued cookie.

domain()

Get or set the cookie's domain.

path()

Get or set the cookie's path.

expires()

Get or set the cookie's expiration time.

AUTHOR INFORMATION

Copyright 1997-1998, Lincoln D. Stein. All rights reserved.

This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

Address bug reports and comments to: lstein@cshl.org

BUGS

This section intentionally left blank.

SEE ALSO

CGI::Carp, *CGI*