

## CGISessionDriverDotPm < TWiki < TWiki

```
---+ Package == extends CGI::Session::ErrorHandler
```

```
=head1 NAME
```

CGI::Session::Driver - CGI::Session driver specifications

```
=head1 SYNOPSIS
```

```
require CGI::Session::Driver; @ISA = qw( CGI::Session::Driver );
```

```
=head1 DESCRIPTION
```

CGI::Session::Driver is a base class for all CGI::Session's native drivers. It also documents driver specifications for those willing to write drivers for different databases not currently supported by CGI::Session.

```
=head1 WHAT IS A DRIVER
```

Driver is a piece of code that helps CGI::Session library to talk to specific database engines, or storage mechanisms. To be more precise, driver is a F<.pm> file that inherits from CGI::Session::Driver and defines L<retrieve()/>retrieve(\$self, \$sid)>, L<store()/>store(\$self, \$sid, \$datastr)> and L<remove()/>remove(\$self, \$sid)> methods.

```
=head2 BLUEPRINT
```

The best way of learning the specs is to look at a blueprint of a driver:

```
package CGI::Session::Driver::your_driver_name; use strict; use base qw( CGI::Session::Driver
CGI::Session::ErrorHandler );
```

```
sub init { my ($self) = @_ ; # optional }
```

```
sub DESTROY { my ($self) = @_ ; # optional }
```

```
sub store { my ($self, $sid, $datastr) = @_ ; # Store $datastr, which is an already serialized string of data. }
```

```
sub retrieve { my ($self, $sid) = @_ ; # Return $datastr, which was previously stored using above store()
method. # Return $datastr if $sid was found. Return 0 or "" if $sid doesn't exist }
```

```
sub remove { my ($self, $sid) = @_ ; # Remove storage associated with $sid. Return any true value
indicating success, # or undef on failure. }
```

```
sub traverse { my ($self, $coderef) = @_ ; # execute $coderef for each session id passing session id as the
first and the only # argument }
```

```
1;
```

All the attributes passed as the second argument to CGI::Session's new() or load() methods will automatically be made driver's object attributes. For example, if session object was initialized as following:

```
$s = CGI::Session->new("driver:your_driver_name", undef, {Directory=>'/tmp/sessions'});
```

You can access value of 'Directory' from within your driver like so:

```
sub store { my ($self, $sid, $datastr) = @_ ; my $dir = $self->{Directory}; # <-- in this example will be
/tmp/sessions' }
```

Optionally, you can define C<init()> method within your driver to do driver specific global initialization. C<init()> method will be invoked only once during the lifecycle of your driver, which is the same as the lifecycle of a session object.

For examples of C<init()> look into the source code of native CGI::Session drivers.

## =head1 METHODS

This section lists and describes all driver methods. All the driver methods will receive driver object (\$self) as the first argument. Methods that pertain to an individual session (such as C<retrieve()>, C<store()> and C<remove()>) will also receive session id (\$sid) as the second argument.

Following list describes every driver method, including its argument list and what step of session's life they will be invoked. Understanding this may help driver authors.

=over 4

=item retrieve(\$self, \$sid)

Called whenever a specific session is requested either via C<< CGI::Session->new() >> or C<< CGI::Session->load() >> syntax. Method should try to retrieve data associated with C< \$sid > and return it. In case no data could be retrieved for C< \$sid > 0 (zero) or "" should be returned. undef must be returned only to signal error. Error message should be set via set\_error(), which can be inherited from L<CGI::Session::ErrorHandler|CGI::Session::ErrorHandler>.

Tip: set\_error() always returns undef. Use it for your advantage.

=item store(\$self, \$sid, \$datastr)

Called whenever modified session data is to be stored back to disk. This happens whenever CGI::Session->flush() is called on modified session. Since CGI::Session->DESTROY() calls flush(), store() gets requested each time session object is to be terminated.

C< store() > is called both to store new sessions and to update already stored sessions. It's driver author's job to figure out which operation needs to be performed.

\$datastr, which is passed as the third argument to represents B session data that needs to be saved.

store() can return any true value indicating success or undef on failure. Error message should be passed to set\_error()

=item remove(\$self, \$sid)

Called whenever session data is to be deleted, which is when CGI::Session->delete() is called. Should return any true value indicating success, undef on failure. Error message should be logged in set\_error().

=item traverse(\$self, \&coderef)

Called only from within CGI::Session->find(). Job of traverse() is to call \&coderef for every single session stored in disk passing session's id as the first and only argument: C<< \$coderef->( \$sid ) >>

=item init(\$self)

Optional. Called whenever driver object is to be initialized, which happens only once during the lifecycle of CGI::Session object. Here you can do driver-wide initialization, such as to open connection to a database server.

=item DESTROY(\$self)

Optional. Perl automatically calls this method on objects just before they are to be terminated. This gives your driver chance to close any database connections or close any open file handles.

=back

=head2 NOTES

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=item \*

All driver F<.pm> files must be lowercase!

=item \*

DBI-related drivers are better off using L<CGI::Session::Driver::DBI|CGI::Session::Driver::DBI> as base, but don't have to.

=back

=head1 BACKWARDS COMPATIBILITY

Version 4.0 of CGI::Session's driver specification is B backward compatible with the previous specification. If you already have a driver developed to work with the previous version you're highly encouraged to upgrade your driver code to make it compatible with the current version. Fortunately, current driver specs are a lot easier to adapt to.

For support information see L<CGI::Session|CGI::Session>

=head1 LICENSING

For support and licensing see L<CGI::Session|CGI::Session>.

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This topic: TWiki > CGISessionDriverDotPm

Topic revision: r2 - 2013-02-17 - TWikiContributor



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